


3 1761 07815860 7





Digitized by the Internet Archive
in 2011 with funding from
University of Toronto

HARVARD ECONOMIC STUDIES

- Volume I: The English Patents of Monopoly, by William H. Price. 8vo, \$1.50, *net*.
- Volume II: The Lodging-House Problem in Boston, by Albert B. Wolfe. 8vo, \$1.50, *net*.
- Volume III: The Stannaries: A Study of the English Tin Miner, by George R. Lewis. 8vo, \$1.50, *net*.
- Volume IV: Railroad Reorganization, by Stuart Daggett. 8vo, \$2.00, *net*.
- Volume V: Wool-Growing and the Tariff, by Chester W. Wright. 8vo, \$2.00, *net*.
- Volume VI: Public Ownership of Telephones on the Continent of Europe, by Arthur N. Holcombe. 8vo, \$2.00, *net*.
- Volume VII: The History of the British Post Office, by J. C. Hemmeon. 8vo, \$2.00, *net*.
- Volume VIII: The Cotton Manufacturing Industry of the United States, by M. T. Copeland. 8vo, \$2.00, *net*.
- Volume IX: The History of the Grain Trade in France, by Abbott Payson Usher. 8vo, \$2.00, *net*.
- Volume X: Corporate Promotions and Reorganizations, by A. S. Dewing. 8vo, \$2.50, *net*.
- Volume XI: The Anthracite Coal Combination in the United States, by Eliot Jones. 8vo, \$1.50, *net*.
- Volume XII: The Evolution of the English Corn Market, from the Twelfth to the Eighteenth Century, by N. S. B. Gras. *In Press*.
- Volume XIII: Some Aspects of the Tariff Question, by F. W. Taussig. *In Press*.

HARVARD UNIVERSITY PRESS
CAMBRIDGE, MASS., U.S.A.

HARVARD ECONOMIC STUDIES

PUBLISHED UNDER THE DIRECTION OF
THE DEPARTMENT OF ECONOMICS

VOL. XI

THE ANTHRACITE COAL
COMBINATION IN THE
UNITED STATES

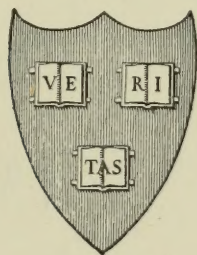
WITH SOME ACCOUNT OF
THE EARLY DEVELOPMENT OF THE
ANTHRACITE INDUSTRY

BY

ELIOT JONES, PH.D.

ASSOCIATE PROFESSOR IN ECONOMICS IN THE STATE UNIVERSITY OF IOWA
SOMETIME INSTRUCTOR IN ECONOMICS IN HARVARD UNIVERSITY

AWARDED THE DAVID A. WELLS PRIZE FOR
THE YEAR 1913-14, AND PUBLISHED FROM
THE INCOME OF THE DAVID A. WELLS FUND



CAMBRIDGE
HARVARD UNIVERSITY PRESS
LONDON: HUMPHREY MILFORD
OXFORD UNIVERSITY PRESS

1914

~~137509~~
10/11/16

COPYRIGHT, 1914
HARVARD UNIVERSITY PRESS

HD
2769
C62J6

137509

TO MY FATHER
INTERPRETER OF SOCIAL IDEALS
IN LITERATURE

PREFACE

THIS book is a study of the combination movement in the anthracite coal industry. It presents an historical narrative of the beginnings and the growth of the industry; chronicles in considerable detail the facts relating to the development of the combination and its control of the business; and describes the attempts of the Government to dissolve the combination. This combination controlling the anthracite coal trade is found to be a combination of railroads, owning either directly, or indirectly through subsidiary coal companies, substantially the entire area of the anthracite coal deposits of the United States. A wide range of problems, therefore, is suggested, — problems relating to railroad control and to the ownership of natural resources, as well as those involved in the trust movement proper. This detailed study of the facts connected with a particular combination has impressed me with the complexity of the trust problem — a problem which for many years has been before the courts and the lawmaking bodies of the United States. In the anthracite industry this problem appears to be peculiarly complex because of the ownership of the coal lands by public carriers. I, therefore, deem myself fortunate in having had the benefit of many suggestions, the manuscript of the book having been read by several professors distinguished in economic science, and by various men of affairs, including a lawyer associated with the anthracite carriers, and a railroad man who has had years of experience as an operating official of one of the anthracite railroads.

To Professor W. Z. Ripley, under whom this study was originally undertaken as a thesis for the degree of Doctor of Philosophy at Harvard University, acknowledgment is made for constant encouragement and guidance. For permission to publish certain parts of Chapters V and VIII, which recently appeared in the

Quarterly Journal of Economics, and for inspiration and counsel, I am much indebted to Professor F. W. Taussig. I wish, further, to thank the many governmental officials, state and national, who have most courteously supplied me with documents and information; the library authorities of Boston, New York, Philadelphia, and Washington for the use of the material at their disposal; and the coal mining companies for permission to make an extended trip through the mines and breakers. For the preparation of the charts I am indebted to my brother Chapin. But most of all I wish to express my deep obligations to my father for unfailing stimulus, and for emphasis, within the classroom and without, on a scientific spirit and on the majesty of fact.

E. J.

CAMBRIDGE, MASSACHUSETTS,

September 6, 1914.

CONTENTS

	PAGE
INTRODUCTORY	3

CHAPTER I

THE HISTORY OF THE ANTHRACITE COAL INDUSTRY TO 1834

The anthracite deposits	4
Description of the anthracite fields	5
Development of the deposits of the Wyoming Region	7
Delaware and Hudson Canal Company	8
Development of the Lehigh Region	10
Lehigh Coal and Navigation Company.	14
Delaware Division Canal.	15
Morris Canal	16
Development of the Schuylkill Region	16
Schuylkill Navigation Company	18
Growth of the coal trade	20
Opposition to incorporated companies	20
Opposition to the union of transportation and mining privileges . .	20
Packer Report	21

CHAPTER II

THE HISTORY OF THE INDUSTRY FROM 1834 TO 1873

Development of railroad systems in the Wyoming and Lehigh Regions and the concentration of coal lands in their hands . .	23
Pennsylvania Coal Company	24
Delaware, Lackawanna and Western Railroad	24
Lehigh Valley Railroad	26
Situation in the Schuylkill Region	28
Philadelphia and Reading Railroad	28
Pennsylvania Constitution of 1874	31
Results of competition between the railroad and canal companies . .	32
Growth of the coal trade	38

CHAPTER III

THE COMBINATIONS FROM 1873 TO 1898

The pools of 1873 to 1876	40
The pool of 1878	45
A friendly understanding, 1880 to 1884.	46

	PAGE
The pools of 1885 to 1886	47
The Reading Combination of 1892-1893	50
The agreement of 1896.	55
Summary	56

CHAPTER IV

THE DEVELOPMENT OF AN EFFECTIVE COMBINATION SINCE 1898

Railroad Consolidation.	59
Purchase of the New York, Susquehanna and Western Railroad by the Erie	59
Purchase of the Central Railroad of New Jersey by the Reading Company	61
Purchase of the New York, Ontario and Western Railroad by the New Haven	64
Purchase of the Lehigh and New England Railroad by the Lehigh Coal and Navigation Company	65
Increased interest in Lehigh and Hudson River Railway secured by Lehigh Coal and Navigation Company	66
Development of a community of interest among the railroads . . .	67
Inter-ownership of stock	68
Interlocking directorates	71
Practical elimination of the independent operators.	73
Purchase of Simpson and Watkins by the Temple Iron Company . .	78
Purchase of the Pennsylvania Coal Company by the Erie Rail- road	83
Purchase of Coxe Brothers and Company by the Lehigh Valley Railroad	86
Percentage contracts for the purchase of coal	87

CHAPTER V

THE PRODUCTION OF COAL

Growth of the trade	98
Production by regions	101
Production by companies	103
Proportion of the output mined by the railroad coal companies .	103
Proportion of the output controlled by the railroad coal companies	105
Distribution of the unmined tonnage among the railroad companies and the independent operators	107
Reserve supply of coal	110
Relation of the railroads to the more important coal mining companies	113
Philadelphia and Reading Railway	114
Central Railroad of New Jersey	117
Lehigh Coal and Navigation Company.	118

CONTENTS

xi

	PAGE
Lehigh Valley Railroad	119
Erie Railroad	122
New York, Susquehanna and Western Railroad	124
Pennsylvania Railroad	124
New York, Ontario and Western Railway	126
Delaware, Lackawanna and Western Railroad	128
Delaware and Hudson Company	129
Summary	130

CHAPTER VI

THE TRANSPORTATION OF COAL

Consideration of the reasonableness of the freight rates on anthracite coal	132
The anthracite rates now in effect	133
Operating cost of transporting anthracite to New York Harbor and to Philadelphia	135
Analysis of the earnings and profits of the anthracite carriers	138
Decision of the Interstate Commerce Commission in the Meeker case	142
Decision of the Interstate Commerce Commission in the Marion Coal Company case	143
Extent to which the anthracite railroads have combined to maintain rates and to apportion traffic	146
Use of the Temple Iron Company	151
Interlocking directorates	154

CHAPTER VII

THE PRICE AND SALE OF COAL

Existence of a combination shown by a study of prices	156
Table of prices	156
Increase in prices in 1900 and 1902	157
Comparison of increased prices with the increase in mining costs . .	158
Comparison of increased prices with the general rise in prices	159
Mode of effecting advance in prices in 1902.	160
Another advance in 1912	162
Investigation of the Bureau of Labor	163
Comparison of irregular prices before 1901 with price movements since 1901	165
Explanation of the discount system	166
Economies of combination	167
Relation of selling prices to circular prices during the period of competition	167
Relation of selling prices to circular prices during the period of combination	168
Explanation of uniformity of price circulars and prices received . . .	170

	PAGE
The price circular of the Reading the standard	172
Extent of competition between the anthracite companies	174
Absence of foreign competition	174
Competition of other fuels	175
The distribution of the consumption of anthracite	175
Retail prices	177
Summary	178

CHAPTER VIII

THE LEGAL STATUS OF THE COMBINATION

Investigation of the anthracite business by the Interstate Commerce Commission	181
Decision of the Supreme Court in the New Haven case	183
Investigation of the bituminous coal business by the Interstate Commerce Commission	184
Factors directing public attention to the conditions in the coal trade	186
The commodity clause legislation	187
Course of the clause through Congress	187
Its effect on the anthracite railroads	193
Difficulties of compliance	194
Extent of compliance	195
Attempt to suspend the penalties	196
Proposed amendment of the clause	197
Government prosecution	197
Decision of the Circuit Court	198
Decision of the Supreme Court	198
Further efforts to amend the clause	201
Effect of the Supreme Court decision	202
Organization of the Delaware, Lackawanna and Western Coal Company	203
Readjustment of the affairs of the Delaware and Hudson Company	204
Another Supreme Court decision	205
Organization of the Lehigh Valley Coal Sales Company	207
Further proceedings against the Lackawanna	208
Another Circuit Court decision	209
Further proceedings against the Reading, the Central of New Jersey, and the Lehigh Valley	210
Prosecution of the anthracite companies for violation of the Sherman Anti-trust Act	212
Decision of the Circuit Court	214
Decision of the Supreme Court	215
CONCLUSION	219
APPENDIX	221
Statistical Tables, I-VII	223
Letters, I-VII	231

CONTENTS

xiii

	PAGE
BIBLIOGRAPHY	238
INDEX	253
LIST OF MAPS AND CHARTS	OPPOSITE PAGE
Map I. Coal fields of Pennsylvania	5
Map II. Pennsylvania anthracite coal field	7
Chart I. Wholesale prices of anthracite coal, 1870 to 1891 . .	45
Chart II. Shipments of anthracite from 1820 to 1910, by five-year periods	99
Chart III. Yearly shipments of anthracite coal, 1898 to 1913 .	101
Chart IV. Shipments of anthracite by regions at stated periods	103
Chart V. Proportional ownership in 1896 of unmined tonnage of anthracite	109
Chart VI. Average of the highest and average of the lowest quotations of the common stock of eight anthracite companies	141
Chart VII. Wholesale price of stove coal at New York Harbor, 1890 to 1913.	165

THE
ANTHRACITE COAL COMBINATION
IN THE UNITED STATES

THE ANTHRACITE COAL COMBINATION

INTRODUCTORY

THE history of the anthracite coal industry of the United States may be divided roughly into four periods, to each of which in this study a chapter is devoted, — the first, extending from the middle of the eighteenth century to 1834; the second, from 1834 to 1873; the third, from 1873 to 1898; and the fourth, from 1898 to the present time.

The period ending in 1834 is that of the early development of the industry. Canals and navigable rivers constituted the chief means of transportation; and by the middle of the thirties the main anthracite canals had been completed. Mining operations, also, were simple, being carried on at that time for the most part above water level. The particular date 1834 has been chosen because in that year a Commission appointed by the Pennsylvania Legislature summed up the conditions prevailing in the trade up to that time. The second period, 1834 to 1873, witnessed the development of the railroad systems, and large purchases by them of coal lands. The first pool was formed in 1873. Pools, or arrangements of one sort or another to secure a greater degree of harmony in the conduct of the coal trade, are the distinguishing features of the third period, 1873 to 1898. By 1898 were plainly discernible the first steps in the formation of a combination which has since effectively controlled the anthracite coal trade. The development of this combination is the main characteristic of the fourth period, 1898 to the present time.

The remaining chapters of this study, to which the first three serve as an introduction, are devoted to an investigation of the control exercised by the combination over the production, transportation, price and sale of coal, and of the efforts made by the Government to dissolve the combination.

CHAPTER I

THE HISTORY OF THE ANTHRACITE COAL INDUSTRY TO 1834

THE history of the anthracite coal industry of the United States is, in effect, a history of the anthracite coal industry of the State of Pennsylvania. Other deposits of anthracite are found in the United States, but they are so small, or at least so little worked, as to be of slight consequence. There are anthracite beds in Colorado and in New Mexico, but their production in 1907 was only 20,000 and 42,000 tons, respectively, and their combined production has never reached 100,000 tons in any one year,¹ which is less than one-fifth of one per cent of the production of the State of Pennsylvania. Some coal has been mined in Rhode Island and in Massachusetts, but the attempts to develop these coal fields in competition with the Pennsylvania coal have hitherto failed. The Providence Coal Mining Company, organized in 1909 to develop the coal mines at Cranston, within a few miles of Providence, Rhode Island, has recently gone into the hands of a receiver. The anthracite beds in the southwestern portion of the State of Virginia are now being developed, but this region, so far as is known, hardly contains enough marketable coal to supply the normal demand of the country for one year.² There are deposits, also, in Alaska, Washington, Arkansas, and possibly in a few other states, but as yet little is known of their extent or their value.

Foreign competition, also, may be practically neglected in a study of the anthracite coal trade of the United States. Anthracite beds are to be found in a number of foreign countries, notably in China, England, Wales, Ireland, Russia, France, Austria, Spain, Switzerland, Australia, Peru, Mexico, and Canada, but though anthracite coal has been duty-free for over forty years,

¹ *Mineral Resources*, 1907, pt. 2, p. 38; and 1910, pt. 2, p. 26.

² Saward's *Coal Trade*, 1906, p. 114.



COAL FIELDS OF PENNSYLVANIA
1911

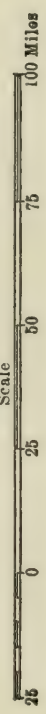
Scale



Bituminous fields



Anthracite fields



MAP I

the imports into the United States have been so small as to be almost negligible.¹

The hard coal deposits of Pennsylvania, which is the greatest anthracite producing section in the world, are localized to a remarkable degree. Five counties in the northeastern part of the State produce 96 per cent of the total output of this country.² The total area in the State containing workable beds is only 484 square miles, whereas the bituminous and lignite coal fields of the United States underlie an area of 496,000 square miles.³ The foregoing map, giving both the anthracite and the bituminous coal areas of Pennsylvania, shows the limited area of the anthracite deposits. But notwithstanding the limited area of the anthracite fields, the anthracite coal industry has grown to enormous proportions. The six most important mineral products of the United States, with their value in 1911, are given in the following table.⁴

VALUE OF PRODUCT

Bituminous and lignite.....	\$451,000,000
Pig iron.....	327,000,000
Anthracite.....	175,000,000
Clay products.....	162,000,000
Copper.....	137,000,000
Petroleum.....	134,000,000

Anthracite coal, therefore, in 1911, was exceeded in value of product by only two other mineral products, metallic and non-metallic, viz., bituminous coal and pig iron. Its value was \$13,000,000 greater than the value of clay products, and \$38,000,000 greater than the value of copper.

The anthracite coal region of Pennsylvania is divided⁵ geologically into four fields. First, the Northern or Wyoming field, extending from Forest City to Shickshinny, a distance of 55 miles with a maximum width of 6 miles, and containing 176 square miles of coal beds. The principal cities in this region are Wilkes-

¹ See p. 174.

² *Mineral Resources*, 1911, pt. 2, p. 173.

³ *Ibid.*, 1907, pt. 2, p. 31.

⁴ *Ibid.*, 1911, pt. 1, pp. 105-106.

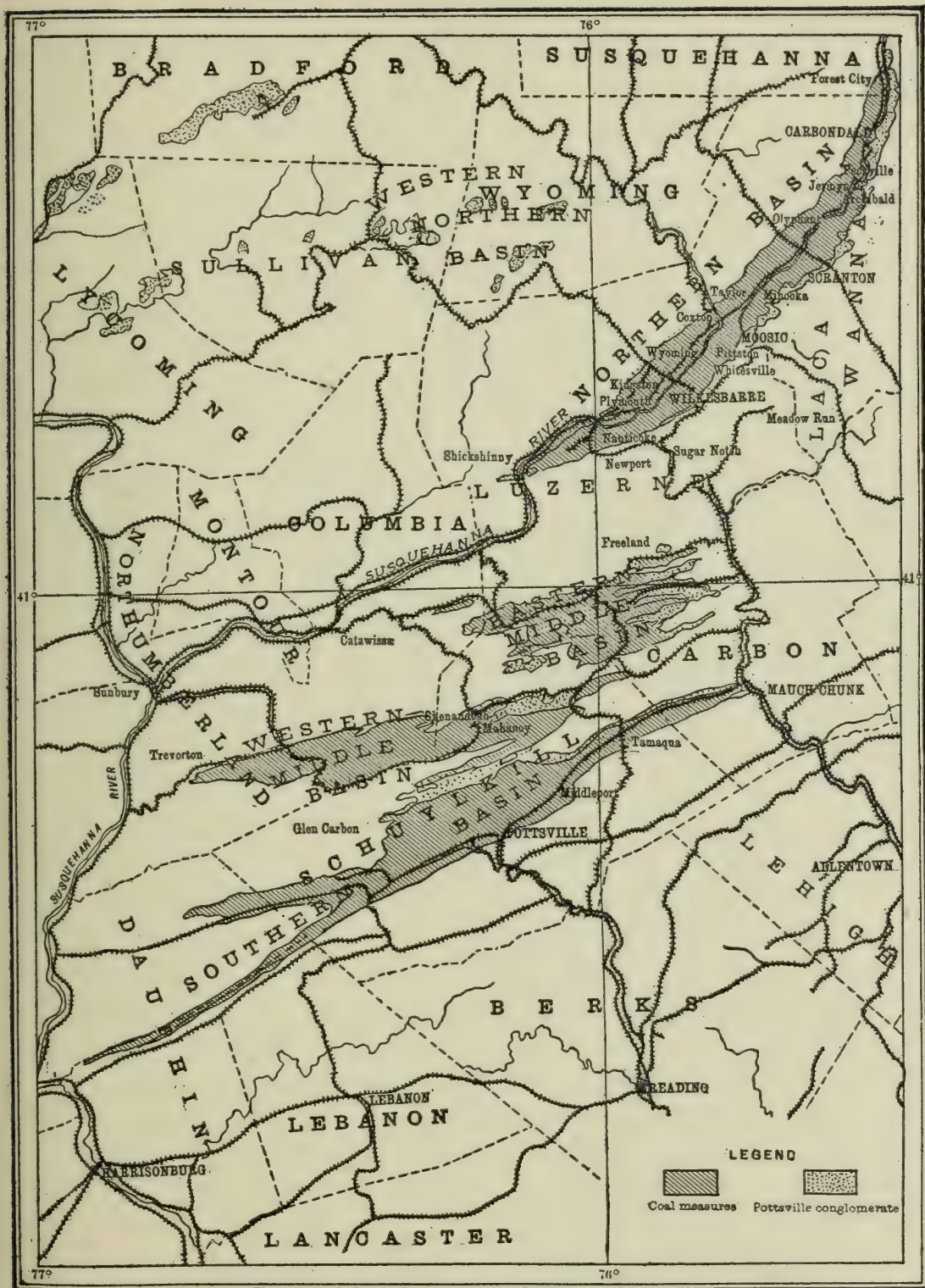
⁵ See Map II, p. 7.

Barre and Scranton. Twenty-five miles to the northwest are several small detached areas, of which the principal is the Bernice coal basin in Sullivan County, containing about 2000 acres of coal lands. Second, the Eastern Middle field, containing only 33 square miles of coal lands, lying about 15 miles south and southwest of the western end of the Northern basin, with a maximum length of 26 miles and a maximum width of 10 miles. The principal town is Hazelton. Third, the Western Middle field, lying southwest of and adjoining the Eastern Middle basin. This field is 36 miles long and 4 to 5 miles wide and contains 94 square miles. Within this region are two distinct basins, the Mahanoy on the east and the Shamokin on the west, which are of equal size and importance. The principal towns in this field are Shenandoah, Mahanoy City, Ashland, Mount Carmel, and Shamokin. Fourth, the Southern or Schuylkill field, the largest of the geographic divisions, with an area of 181 square miles. The Schuylkill field lies south of and approximately parallel to the Western Middle field, which it adjoins for a short distance. It extends from Mauch Chunk on the Lehigh river to Dauphin on the Susquehanna river, a distance of 70 miles. It has a maximum width at Pottsville of 8 miles, but tapers gradually toward the east and the west. The principal towns are Pottsville and Tamaqua.

For trade purposes, however, which is the classification followed in this study, the anthracite coal region is divided into three fields — the Wyoming, the Lehigh, and the Schuylkill — the Wyoming or Northern field, including for trade purposes the product of the Bernice Coal basin; the Lehigh field, consisting of the Eastern Middle basin referred to above, and of the eastern end of the Schuylkill field, known as the Panther Creek basin, extending from Mauch Chunk to Tamaqua; and the Schuylkill field, which includes the larger part of the Schuylkill basin, *i. e.*, all lying west of Tamaqua, and also the Western Middle field.¹

In tracing the early development of the coal trade these three regions — the Wyoming, the Lehigh, and the Schuylkill — are considered separately, as the development of each region pro-

¹ *Twenty-second Annual Report of the U. S. Geological Survey, 1900-01, pt. 3, pp. 63-65.*



PENNSYLVANIA ANTHRACITE COAL FIELD.

Scale

10 0 10 20 Miles

MAP II

ceeded independently, for the most part, of the development of the other regions.

WYOMING REGION

Anthracite coal was first discovered in the Wyoming region. In 1762 Parshall Terry and a company of Connecticut pioneers found coal on the banks of the Susquehanna river, near the site of the present city of Wilkes-Barre.¹ It was in this same field, also, that the first successful attempt, of which we have any record, was made to burn coal. Obadiah Gore, a blacksmith, who had migrated to the Wyoming Valley from Connecticut, used it for fuel in his forge at Wilkes-Barre in 1769.² It soon became the chief fuel used in the valley. As early as 1775 a cargo of Wyoming coal was floated down the Susquehanna river in boats to Harrisburg, and from there was conveyed by wagons to the Government arsenal at Carlisle, for use in the manufacture of arms for the Revolutionary soldiers.³ This is the first recorded shipment of anthracite to market, but during the Revolutionary War similar shipments were made annually.

The Wyoming region was first developed, however, by Abijah Smith, who had migrated from Connecticut in 1806 and settled at Plymouth, at the southern end of the Northern basin. He purchased 75 acres of coal lands for about \$500, and began at once the mining of coal.⁴ In the fall of 1807 he shipped about 50 tons of anthracite to Columbia, Lancaster County, Pennsylvania, and in the following year several "ark" loads were sent to Columbia and elsewhere.⁵ Abijah and his brother John, who soon joined him in the business, had many difficulties to contend with. A market for their coal had first of all to be established, as the value and use of anthracite was little known. Though experiments had already been made showing that the coal would burn successfully in an open grate and in a stove, yet anthracite up to that time had been used almost entirely in furnaces and forges.

¹ Kulp, *Coal, its Antiquity, Discovery and Early Development*, pp. 7, 10.

² *Ibid.*, pp. 11-12.

³ Hazard's *Register*, xiii, p. 209.

⁴ Wright, *Historical Sketches of Plymouth*, p. 315.

⁵ Kulp, *op. cit.*, p. 13.

The Smith brothers created a demand for coal for domestic purposes by setting up grates in public houses and demonstrating its use and convenience. Added to this difficulty of creating a market was that of transporting their coal to market. They shipped their coal (in "arks," holding some 60 tons) down the Susquehanna river, but about one ark out of every three either sank to the bottom or was grounded on the rapids. When we consider that the Susquehanna was the largest and most navigable waterway in the coal fields, the difficulties of transportation in the other fields may well be imagined. In spite of these obstacles, however, the Smith brothers shipped annually from 400 to 500 tons to points on the Lower Susquehanna river, and to Baltimore, and to New York.¹ The Smiths, and especially Abijah, may be considered the real pioneers in the anthracite coal business, as it was they who began the traffic in coal as an article of general use. They carried on a successful trade for thirteen years prior to 1820, the usual date for beginning the record of coal shipments.²

The projector of the Delaware and Hudson Company was also early in the field. Coal had been discovered at Carbondale, near the northern extremity of the Wyoming region, in 1799. In 1812, Mr. William Wurts, a young Philadelphia merchant, bought large blocks of coal lands in the neighborhood of Carbondale for from 50 cents to \$3.00 an acre.³ In 1815 William and his brother Maurice sent their first ark load to Philadelphia by the Lackawaxen and Delaware rivers,⁴ but for several years thereafter no further shipments are recorded. Transportation by the above route was difficult and exceedingly expensive. The cost of hauling the coal in wagons from the mines at Carbondale to the Lackawaxen river was \$2.50 per ton, and in addition there was the cost of transportation down the river to Philadelphia.⁵

¹ *Twenty-second Annual Report of the U. S. Geological Survey*, 1900-01, pt. 3, p. 75.

² See p. 14.

³ Hollister, *History of the Lackawanna Valley*, p. 287.

⁴ *Twenty-second Annual Report of the U. S. Geological Survey*, 1900-01, pt. 3, p. 75.

⁵ Roberts, *Anthracite Coal Industry*, p. 62.

Furthermore, the discoveries of coal in the Lehigh and the Schuylkill fields¹ suggested to the Wurts Brothers that the natural outlet for the coal of the Northern field was not Philadelphia but New York. They decided, then, in 1822 to build a railroad and a canal from their coal mines at Carbondale to some point on the Hudson river in New York State, whence shipments could be made to New York City. By an Act of the Pennsylvania Legislature, passed March 13, 1823, Maurice Wurts was authorized to improve the navigation of the Lackawaxen river up to the Delaware river.² On April 23, 1823, the Delaware and Hudson Canal Company was chartered by the State of New York, and authorized to construct a canal from the Delaware river to such point on the Hudson as the corporation judged best. The Delaware and Hudson Canal Company was also authorized to contract with Maurice Wurts for the purchase of the right conferred upon him to improve the navigation of the Lackawaxen river.³ The authority to transfer this right was given by the Legislature of Pennsylvania in April, 1825.⁴ The connecting link between these waterway projects and the coal mines at Carbondale was formed by the building of a gravity railroad. The authority to acquire coal lands in Pennsylvania had been given the Delaware and Hudson both by its charter⁵ and by acts of the Pennsylvania Legislature.⁶

Fortunately for the Delaware and Hudson Canal Company public confidence in canal enterprises was strong at this time, and the company had no difficulty in securing the requisite capital. The books of the company were opened to subscription on January 8, 1825, and all the stock (\$1,500,000) was taken on the same day.⁷ The Delaware and Hudson Canal Company soon had many difficulties to contend with, and was even compelled to borrow money from the State to relieve its financial embarrassment.

¹ See pp. 10 *et seq.* and pp. 16 *et seq.*

² *Laws of Penn.*, 1823, ch. 61.

³ *Laws of N. Y.*, 1823, ch. 238, p. 305.

⁴ *Laws of Penn.*, 1825, ch. 78.

⁵ *Laws of N. Y.*, 1823, ch. 238, p. 305.

⁶ *Laws of Penn.*, 1825, ch. 78.

⁷ *Niles Register*, xxvii, p. 336 (1825).

In 1829, however, the gravity railroad,¹ extending from Carbondale to Honesdale (16 miles), and the canal, extending from Honesdale to Rondout on the Hudson (107 miles), were completed at a cost of \$2,305,599.² During that year 7000 tons of coal were sent down the Hudson river to New York City. From that time on the trade grew rapidly. The shipments of coal from this region in the year 1834 were 43,000 tons, but normally at this time they were nearer 100,000 tons, over 110,000 tons having been sent to market from this region in 1833.³ By the end of the first period (1834), then, though the total output was as yet comparatively small, the development of the Wyoming field was well under way.

LEHIGH REGION

Coal was first discovered in the Lehigh field in 1791 near the town of Mauch Chunk. Philip Ginter, a hunter, accidentally kicked a black stone which lay in his path, and thinking that perhaps it might be "stone coal," he picked it up, and carried it to Colonel Jacob Weiss, who lived at Fort Allen. Colonel Weiss took it to Philadelphia, and showed it to some of his friends, who were convinced of its value and who recompensed Ginter for showing them where he had found the coal. In the following year (1792) Weiss and his friends, including Robert Morris, the celebrated financier, formed the Lehigh Coal Mine Company, but without a charter of incorporation, and purchased about eight or ten thousand acres of coal lands.⁴ This company in 1793 built a road from the mines to the Lehigh river near Mauch Chunk, and attempted to ship the coal down the river to market.⁵ But the nearest market was Philadelphia, about a hundred miles away, and this could hardly be said to be a market, as stone coal

¹ It was upon this gravity railroad that there was put into use, in 1829, the first locomotive ever to run on a railroad track in America. Brown, *The History of the First Locomotives in America*, p. 83, and Clark, *The Wyoming Valley*, p. 78.

² Hazard's *Register*, xiii, pp. 210-211.

³ See Appendix, Table I.

⁴ *Memoirs of the Historical Society of Pennsylvania*, i, p. 321, "A Brief Account of the Discovery of Anthracite Coal on the Lehigh."

⁵ Hazard, "History of the Introduction of Anthracite Coal," *Memoirs of the Historical Society of Pennsylvania*, ii, p. 157.

was then distinctly a novelty. The coal, furthermore, lay in the midst of a mountainous region, and could only with great difficulty be brought to market. Hence the undertaking was temporarily abandoned. The difficulties of transportation constituted at this time one of the main obstacles to the development of the coal trade. Coal which was worth from \$1 to \$2 at the mines sold for \$10 to \$20 in the market, transportation charges thus constituting about 90 per cent of the market price, whereas at the present time they are about 30 per cent. Furthermore, the effort of the Coal Mine Company was premature. There was a plentiful supply of wood for fuel, and such demand as there was for coal for industrial purposes could easily be filled by the Liverpool and Virginia coals. The need of some new fuel supply was not, as yet, a factor in stimulating the development of the anthracite coal fields.

In 1798 the navigation of the Lehigh river was somewhat improved by a company organized for that purpose. Five years later, in 1803, the Lehigh Coal Mine Company again resumed operations. Six "arks" containing coal were sent down the river, but only two of them reached their destination, and it was with great difficulty that the coal was disposed of. The city authorities of Philadelphia finally purchased it for use in their steam-engine at the water works, but could not make it burn. It was later used for gravelling the walks of their grounds.¹ This experience was that of many of the early experimenters with anthracite. The inability to ignite the coal was probably due to the fact that the early miners could not distinguish coal from bone and slate, and therefore sent it all, coal and impurities, to market. In 1808, however, Judge Jesse Fell successfully burned anthracite coal in an iron grate in his fireplace.² This successful experiment was given considerable publicity, and did a great deal at the time to create a belief in the utility of anthracite.

Shortly thereafter the War of 1812, by closing our ports to the entry of foreign and Virginia coals, brought about a coal shortage in the coast cities. This had the effect of stimulating further

¹ Daddow and Bannan, *Coal, Iron and Oil*, pp. 115-116.

² Fell, *Memoirs of the Historical Society of Pennsylvania*, ii, p. 163.

attempts to develop the anthracite coal deposits, which were the most accessible sources of fuel supply. Toward the close of 1813, Jacob Cist, Charles Miner, and John Robinson decided, if satisfactory arrangements could be made with the Lehigh Coal Mine Company, to undertake the development of their property. In December, 1813, a lease was secured from the Company, which gave Cist and his associates the privilege of taking for ten years as much coal as they desired, provided that every year a small quantity of coal was shipped to market. The extremely favorable terms of the lease show the difficulty in bringing the coal to market and disposing of it. In 1814 five arks of coal were started down the Lehigh, but the channel of the river was quite crooked and the stream was full of rocks, and only two of the arks reached Philadelphia. In addition to this uncertainty of transportation there was the difficulty of selling the coal which had successfully braved the perils of navigation. Handbills were published in English and in German explaining how to burn the coal, and certificates as to the value of the coal were secured from blacksmiths, — though it was sometimes necessary to bribe the journeymen in order to induce them to give the experiment of burning the coal a fair trial. But more effective than any efforts in this direction was the rise in price of charcoal as the result of the war, which forced manufacturers to try the experiment of using anthracite. Their experiments with it were successful, and the value of anthracite came to be more generally recognized. But upon the cessation of hostilities coal, which had been selling for \$21 per ton, fell below the cost of transporting it to market, and the business was consequently abandoned.¹

This failure, however, did not discourage the coal pioneers. In December, 1817, Josiah White, an engineer of unusual ability, and Erskine Hazard, who were desirous of securing coal for their wire works at the Falls of the Schuylkill, purchased an immense amount of coal lands in the neighborhood of Mauch Chunk. White had had some experience with anthracite in the Schuylkill region, and had been the moving spirit in securing the charter for the Schuylkill Navigation Company,² but not being able to agree

¹ Hazard's *Register*, xiii, pp. 273-274 (Letter of Charles Miner). ² See pp. 17-18.

with those who were in control of the company, he turned to the Lehigh field. He came to the conclusion, also, that coal could be secured more cheaply in this field. In the following month, January, 1818, a lease of the property of the Lehigh Coal Mine Company was taken for twenty years, the only condition of the lease being that, after a given time for preparation, the lessees were to deliver in Philadelphia for their own benefit at least 40,000 bushels or approximately 1500 tons annually, and were to pay on demand an annual rental of one ear of corn.¹ Permission was then obtained from the Legislature to improve the navigation of the Lehigh river. An Act, passed on March 20, 1818, conferred upon White and his associates practically the sole jurisdiction of the Lehigh river. The natural navigation of the river at this time was so dangerous and the transportation of coal so difficult, that some such inducement was felt to be necessary in order to secure the improvement of the navigation of the river.² To secure the necessary capital, White, Hazard, and Hauto, who had later become a partner, proposed to create a joint-stock company, which should undertake both the improvement of the navigation and the working of the coal mines. But as some favored the project of improving the navigation and others the mining of coal, two separate companies were formed. The Lehigh Navigation Company, with a capital of \$50,000, was formed August 10, 1818, to undertake the improvement of the Lehigh river. To this company White and his associates transferred all their privileges in the navigation, but they still retained the exclusive management of the concern and a claim upon a percentage of the profits. The Lehigh Coal Company to which White, Hazard, and Hauto granted all their real estate, was formed October 21, 1818, with a capital of \$55,000. This company was to mine the coal, and to deliver it at the river to the Navigation Company.³

¹ T. C. James, "History of Lehigh Coal and Navigation Company," quoted in *Mineral Industry*, iv, p. 147. See also "Memoir of Josiah White," by S. W. Roberts, quoted in *Memoirs of the Historical Society of Pennsylvania*, i, p. 330.

² Hazard's *Register*, xiii, p. 194.

³ T. C. James, "History of Lehigh Coal and Navigation Company," quoted in *Mineral Industry*, iv, pp. 149-150.

Yet before the operations of these companies could meet with any success, a number of difficulties had to be overcome. A severe drought showed that the supply of water in the Lehigh river could not be depended upon to furnish regular navigation, and it became necessary to resort to artificial freshets to make the river navigable when coal was en route. In the spring of 1820 considerable damage was caused by ice. To improve the navigation, the two companies, on April 21, 1820, agreed to unite, providing \$20,000 could be raised. This amount was subscribed and the navigation was resumed.¹ In the same year (1820) 365 tons of coal were sent to market. Though this shipment had been preceded by many others, it was the first by any of the companies now engaged in the transportation of coal, and the standard tables of shipments begin with this one by the Lehigh Coal and Navigation Company. In carrying out the plan of union agreed upon the Lehigh Coal and Navigation Company was incorporated, February 13, 1822.² The charter of the company renewed the privileges of the original coal company, which included both the mining and the transportation of coal and the charging of tolls for the use of the river. In the new company White and Hazard became ordinary stockholders, giving up all the exclusive privileges which they had formerly held. The State reserved the right to acquire the improvements on the river at the end of thirty-six years (but this right was not exercised).

In 1826 the shipments of coal to market from this region amounted to about 31,000 tons.³ As this was rapidly wearing away the wagon road which had been built from the mines to the river, the road was replaced in 1827 by a gravity railroad, nine miles in length. This was the first railroad built in Pennsylvania, and the first in the United States, except a much shorter railroad in a granite quarry in Massachusetts.⁴ Further improvements

¹ T. C. James, "History of Lehigh Coal and Navigation Company," quoted in *Mineral Industry*, iv, pp. 149-150.

² *Laws of Penn.*, 1822, ch. 20.

³ Erskine Hazard wrote in January, 1827, "Anthracite coal promises to become the largest and most profitable staple of Pennsylvania." — *Memoirs of the Historical Society of Pennsylvania*, ii, p. 161.

⁴ "Memoir of Joseph White," *op. cit.*

were soon seen to be necessary. Up to this time the descending navigation had been accomplished by artificial freshets, the first regular use of this method of navigation.¹ There was, of course, no ascending navigation by this method, and for a number of years the men who brought the boats down had returned on foot. But to build a new boat for every load was costly, and at the rapid rate of consumption was sure ere long to use up all the available lumber supply. The Lehigh region was at a disadvantage, furthermore, in that the Schuylkill region had an uninterrupted slack-water navigation. It was decided, therefore, to change the navigation on the Lehigh into a slack-water navigation. Upon the completion of the gravity railroad in 1827, this work was vigorously undertaken. The Lehigh Canal extending from Mauch Chunk to Easton (46 miles) was completed in July, 1829.²

These improvements in navigation extended only to the town of Easton, where the Lehigh river flowed into the Delaware river. The Lehigh Coal and Navigation Company desired to improve the Delaware, and thereby secure better navigation to Philadelphia. It applied to the Legislature for authority to carry out this project, but the privilege was not granted, as the State proposed to undertake the improvement itself. This canal, which might be considered an extension of the canal of the Lehigh Coal and Navigation Company, was available for active use by the latter part of 1832, though water had been let into it two years previously. The greatest effectiveness of the Delaware Division Canal was not attained, however, because of the failure to make its size uniform with that of the Lehigh Canal. The narrowness of the locks made it necessary for the boats of the Coal and Navigation Company to trans-ship at Easton, and this checked the development of the coal trade by this route.³

Toward the close of this period still another canal, furnishing an outlet from the Lehigh region, was built, the object being, as

¹ Hazard's *Register*, xiii, p. 299, "Answer of the Lehigh Coal and Navigation Company."

² "Memoir of Josiah White," *op. cit.*

³ Jones, *Anthracite-Tidewater Canals*, pp. 60-63.

in the case of the other canals previously mentioned, the development of the anthracite coal trade. It was proposed at first that the Morris Canal, to extend from Easton across the State of New Jersey to New York, should be built by the State, but its construction was finally undertaken by a private company incorporated in the latter part of 1824. Belief in the success of the project was so great that the company's capital was subscribed twenty times over. The work of construction was commenced in July, 1825, and the line from Easton to Newark, New Jersey, completed on November 2, 1831. The usefulness of the canal was greatly diminished through the lack of a New York connection, the canal boats being too small to permit of their being towed to New York harbor. In 1834 a loan was secured for the extension of the canal to Jersey City. But not during this period, nor in fact for several years to come, was the canal a real factor in the coal-carrying trade.¹ Mention of it seems appropriate, however, as it was one of the numerous projects undertaken to further the development of the anthracite coal industry.

As the result of these improvements in transportation, especially those undertaken by the Lehigh Coal and Navigation Company, the trade developed rapidly. The shipments of coal, which had been 365 tons in 1820 and a little over 1000 tons in 1821, had risen by 1834 to 106,000 tons. And this was approximately the normal production at that time of the Wyoming field also, though considerably in excess of the production of the Wyoming field in that particular year.²

SCHUYLKILL REGION

In that portion of the Schuylkill region known as the Western Middle field, the presence of coal was known as early as 1770, but not until 1834 were these beds developed.³ In the Southern portion of the Schuylkill region anthracite appears to have been first noticed about 1790. There is a story that Nicho Allen on one of his hunting expeditions had built a fire on some rocks and

¹ Jones, *Anthracite-Tidewater Canals*, pp. 106-115.

² See Appendix, Table I.

³ *Twenty-second Annual Report of the U. S. Geological Survey*, 1900-01, pt. 3, p. 75.

gone to sleep. He awoke to find the rocks a glowing mass of fire, and in the morning noticed that the rocks corresponded to the usual descriptions of anthracite coal.¹ The first shipment of coal from this region was made about 1800, when William Morris took a wagon-load to Philadelphia. This appears to have been the first shipment of anthracite coal to Philadelphia and the first to tide-water. Morris was unable to sell his coal, however, and retired from the business disheartened.²

Early in 1812 Colonel George Shoemaker of Pottsville hauled nine wagon-loads of coal to Philadelphia, and attempted to find a market for it. He was called an impostor for trying to pass off stone on the people for coal, but by persistence managed to dispose of two of his loads at the cost of transportation. The remaining seven loads of coal he gave away, yet the very men to whom he had given his coal secured a writ from the authorities for his arrest as a swindler, and Colonel Shoemaker found it necessary to flee from "justice." Those who had purchased his coal, however, had unusually good success with it. One of the loads was bought by Messrs. White and Hazard, manufacturers at the Falls of the Schuylkill.³ Mr. White spent a whole morning trying by various devices to ignite the coal he had purchased, but finally abandoned the attempt. Returning somewhat later it was found that the coal had developed such a heat that the whole furnace was in danger of being melted. This experiment became widely known, and made many friends for the stone coal, as it was then called.⁴ Messrs. White and Hazard, stimulated, no doubt, by their success with this experiment, endeavored in 1812 to secure a law for the improvement of the Schuylkill river, but their plan was ridiculed in the Legislature, and their attempt to get a charter was for the time being unsuccessful.⁵ The Schuylkill field was soon opened to development,

¹ Daddow and Bannan, *Coal, Iron and Oil*, p. 120.

² Hazard's *Register*, xiii, p. 274. Appendix no. 18. "Extract from the First Report of the Pottsville Board of Trade."

³ For the part White and Hazard later played in the development of the Lehigh region, see pp. 12 *et seq.*

⁴ Daddow and Bannan, *Coal, Iron and Oil*, pp. 122-123.

⁵ Hazard's *Register*, iii, p. 302.

however, by the Schuylkill Navigation Company, chartered by the Pennsylvania Legislature on March 8, 1815.¹ This company was formed for the double purpose of securing an outlet to the seaboard for the agricultural and lumber products of the Schuylkill Valley and of forming a connecting link in the improvements undertaken by the State of Pennsylvania to secure the western trade. It had at its inception little connection with the coal business. Though there had been some shipments of coal down the Schuylkill river to Philadelphia in 1814, the coal trade at this time was not regarded as of much importance. It was not to be expected, therefore, that the company should be incorporated with mining privileges, as in the Wyoming and Lehigh fields.

The construction of the Schuylkill canal was commenced in the middle of 1816, and was completed (108 miles in length) in 1825 at a cost of nearly \$3,000,000.² Its completion was sufficiently advanced in 1822 to permit of the passage of nearly 1500 tons down the canal, but not until 1825 was the navigation in condition to permit boats to go all the way from Pottsville to Philadelphia.³ In that year about 6000 tons of coal were shipped down the canal.⁴ Quite contrary to expectations, the carriage of anthracite coal formed the chief source of revenue for the canal even from the beginning. In 1825, the first year when a separate account of the articles carried was kept, the tolls received from coal amounted to \$9700, or over 60 per cent of the total receipts from tolls, and in the succeeding years coal became even more the predominant source of income for the company.⁵ By 1825 the trade from the Schuylkill field was developing rapidly. By 1834 over 200,000 tons were being shipped annually by the Schuylkill Canal, the profits on the transportation of which went entirely to the Schuylkill Navigation Company, — which had, until the Philadelphia and Reading Railroad entered this field in 1842, a practical monopoly of the coal-carrying trade of the Schuylkill, or Southern, region.

¹ *Laws of Penn.*, 1815, ch. 62.

² Hazard's *Register*, xiii, p. 187.

³ Daddow and Bannan, *Coal, Iron and Oil*, p. 123.

⁴ See Appendix, Table I.

⁵ Hazard's *Register*, xiii, p. 187.

At the close of the first period, ending in 1834, nearly two-thirds of the total shipments of anthracite to market were mined in this Southern field.¹ The more rapid development of this region is easily explained. The cost of opening a mine in the Southern region was small. The surface of the ground was quite broken and there were numerous outcrops which could be cheaply mined without any very considerable outlay. In the Wyoming field the surface was more even, and the sinking of an opening below water level was generally required in order to mine the coal. This retarded the development of the Northern field. In the Lehigh region the coal was quite accessible, but the development of this region was undoubtedly checked by the high tolls charged by the Lehigh Coal and Navigation Company, which made it difficult for the independent operators to compete. The Schuylkill Navigation Company, not being engaged in the mining of coal, was interested in furthering the development of the coal fields by independent operators. During this early period, therefore, it followed the policy of lowering tolls in order to develop trade. In 1833 there were as many as 47 coal operators shipping over the Schuylkill Canal,² and for many years the Southern field was developed entirely by independent operators, the transportation companies owning no coal lands and conducting no mining operations whatsoever.

In addition to these 5 canals, some short railroads were built into the coal fields during the early thirties. The longest of these was the Little Schuylkill Railroad, some 20 miles in length, which began shipping from Tamaqua, in the Southern region, in 1832. These railroads, many of which were owned by the canal companies, served mainly as feeders to the canals. They played little part during this early period in the growth of the coal trade.

The main features of the early development of the anthracite industry may be briefly summarized as follows:

The Wyoming field was first developed on any considerable scale by the Delaware and Hudson Canal Company, which exercised both mining and transportation privileges, having, in

¹ See Appendix, Table I; also chart, p. 103.

² Jones, *op. cit.*, p. 131.

fact, constructed its canal in order to secure a market for its coal. The Lehigh region was developed by the Lehigh Coal and Navigation Company, which was likewise engaged in both the mining and the transportation of coal, and which had constructed its canal for the purpose of securing a wider market for its coal. Two other canals, the Delaware Division Canal and the Morris Canal, were built during the early part of the thirties. Both of these served as feeders to the Lehigh Canal, but neither of them possessed any mining privileges. In the Schuylkill region the conditions were notably different. Though the Schuylkill Canal soon became primarily a coal-carrying canal, it was not constructed with the coal trade in view, and was never granted mining privileges. The production of coal in this region was carried on by independent operators.

In all three of these anthracite fields the improvements in transportation, and a growing recognition of the value of anthracite, led to a rapid growth of the coal trade. The total shipments of coal trebled during the four years from 1826 to 1829, and quadrupled during the succeeding four years.¹ There was in fact an over-development of the industry, especially in the Schuylkill field, which was followed by the inevitable reaction, bringing with it much financial distress. A number of coal companies had been incorporated in this field, and they were held responsible for the disastrous state of the trade. It was maintained that these companies had not been incorporated for mining purposes, but purely in order to dispose of their coal lands by selling their stock. To develop a ready market for their stock it was claimed that they had paid high wages, opened mines wastefully, over-developed the industry, and, when the wave of speculation had been carried sufficiently high, had sold out and left the trade in a demoralized state for the independent operators.² There was strong opposition, also, to the union of transportation and mining privileges. It was said in 1833, "that no greater evil can be inflicted upon a coal district than to give a coal company control of the Railroad or Canal leading into that district."³ It was

¹ See Appendix, Table I.

² Hazard's *Register*, xiii, pp. 246-251.

³ Taylor, *The Effect of Incorporated Coal Companies upon the Anthracite Coal Trade of Pennsylvania*, Pottsville, 1833.

charged that the Delaware and Hudson and the Lehigh Coal and Navigation Company had locked up thousands of acres of coal lands, which had previously been opened to development. The Lehigh Coal and Navigation Company was accused, in addition, of having charged exorbitant tolls, thereby preventing independent operators from competing with it in the market, and of having forced the miners to live in the company's houses and to buy at the company's stores at unjust rates.¹

These complaints became so frequent that in March, 1833, a Commission was appointed by the Pennsylvania Legislature "to investigate the present state of the coal trade . . . and the history of the mining operations generally, with a view to ascertain the effect of incorporated companies with mining and trading privileges on the progress of the business . . . and to inquire what further legislative provisions are necessary to protect, facilitate and encourage this industry."² The Packer Report, so named after its Chairman, Samuel Packer, was published in 1834, and provides much of the available information as to the early history of the industry. The Commission addressed a long list of questions to the individuals and the companies prominent in the anthracite coal trade, and the replies received are of interest as showing the feeling at that time toward incorporated companies. Those opposed to incorporated companies maintained that mining operations could be conducted much more economically by individuals, because the affairs of incorporated bodies always have been and always must be managed by those unacquainted with the business they are conducting. Individual operations, furthermore, could be carried on without an agent with a fat salary at every turn, and without a lavish waste of materials at every point.³ The effect of incorporated companies upon the general prosperity of the country was held to be comparable "to the dominion of despotism and tyranny, usurping the rights and trampling upon the liberties of the people."⁴ The inhabitants of a district or country placed under their control, being dependent upon one source alone for bread, would soon become so for

¹ Hazard's *Register*, xiii, p. 278.

² *Ibid.*

³ *Ibid.*

⁴ *Ibid.*, p. 246.

their opinions also.¹ Employees would be compelled to vote on all questions as their employers wished, or be discharged.² In favor of granting the privilege of incorporation it was maintained that individuals with limited knowledge would not be willing to hazard enough capital in the coal business to give stability and permanency to the mining interests, especially as the expense of operating was increasing greatly through the necessity of sinking below water level.³

The Commission concluded that it was obvious that incorporated companies had generally been beneficial. These companies had been mainly instrumental in introducing the use of anthracite coal, and they had furnished a regular supply of coal at a reasonable price. Nevertheless, said the Commission, incorporated companies should be formed only when individual means are not available. At this day individual means are adequate and there is, therefore, no greater necessity for conferring corporate powers upon a class of men to mine coal than upon a society of farmers to plough their lands. It therefore recommended that mining be left open to the free and untrammelled exercise of individual enterprise. The question as to whether any corporate privilege was necessary could be determined by the Legislature,⁴ but "the grand evil . . . against which the committee would most earnestly protest, is in giving them, in addition to their mining privileges, the control of a canal or railroad, with power to lock up at pleasure the resources of a whole valley or community."⁵

¹ Hazard's *Register*, xiii, p. 250.

² *Ibid.*, p. 249.

³ *Ibid.*, p. 247.

⁴ *Ibid.*, pp. 216-218.

⁵ *Ibid.*, p. 218.

CHAPTER II

THE HISTORY OF THE INDUSTRY

FROM 1834 TO 1873

It is evident from the Packer Report that the dangers connected with the union of transportation and mining privileges were clearly recognized at this time. Had the recommendations of the Commission been adopted, and the transportation and the mining of coal been kept separate, the complicated system whereby the trade is now controlled would never have arisen. That these recommendations were not followed becomes clear from a study of the industry during the second period, 1834 to 1873.

The characteristic features of this period are the development of railroad systems, the concentration of the coal lands in their hands, and the elimination of the canal systems as dominant factors in the development of the industry. As for the first of these, the extension of railroad facilities proceeded more slowly in the Wyoming and Lehigh regions up to the middle of the nineteenth century than it did in the Schuylkill region. The Delaware and Hudson Canal Company and the Lehigh Coal and Navigation Company, until about 1850, were the only outlets to tide-water from the Wyoming and Lehigh fields, — with the exception of some small shipments down the Susquehanna river. Such extensions of railroad facilities as there were took the form of lateral roads within the coal fields, serving for the most part as feeders to the existing means of transportation. One of the most important of these was the Lehigh and Susquehanna Railroad, begun in 1837 and completed in 1846. It extended from the Susquehanna river at Wilkes-Barre southward to White Haven, a distance of nearly 20 miles.¹ At White Haven a connection was made with the Lehigh Canal, which had been ex-

¹ Daddow and Bannan, *Coal, Iron and Oil*, pp. 111, 119.

tended northward from Mauch Chunk to White Haven. The Lehigh and Susquehanna Railroad proved to be a most valuable feeder to the Lehigh Canal.

But during the early fifties the transportation facilities of the Wyoming and Lehigh fields were greatly extended. The Pennsylvania Coal Company, which had been chartered in Pennsylvania in 1838, "for the purpose of mining coal, and for transacting the usual business of companies engaged in mining, transporting to market, and selling of coal, and the other products of coal mines,"¹ now first began to take an active part in the coal trade. In 1850 it built a gravity railroad extending from Pittston to Hawley on the Delaware and Hudson Canal, and also purchased large amounts of coal lands, soon becoming one of the largest producers of coal.

In the following year, 1851, the Delaware, Lackawanna and Western Railroad Company began the mining of coal. This company had been incorporated in 1849,² and in 1851 had been authorized by the Pennsylvania Legislature to purchase not more than 1000 acres of coal lands.³ By an act passed in 1855 the quantity of coal lands which the Lackawanna Railroad might hold was increased to 2000 acres, and the Lackawanna was given specific authority to "hold coal lands, and to mine, purchase, transport and vend coal."⁴ But by the consolidation of a number of coal companies and their merger with the Lackawanna Railroad, the amount of coal property owned by the railroad was considerably increased. The Nanticoke Coal and Iron Company had been organized under an act of the Pennsylvania Legislature passed on April 13, 1864, and had been authorized to acquire 5000 acres of coal lands.⁵ Under the authority of the act of April 13, 1868, "authorizing the merger and consolidation of

¹ *Laws of Penn.*, 1838, no. 73.

² Not called the Delaware, Lackawanna and Western until 1853. In that year an act of the Pennsylvania Legislature provided for the consolidation of the Lackawanna and Western Railroad Company, incorporated in 1849, and the Delaware and Cobb's Gap Railroad Company, incorporated in 1850, into the Delaware, Lackawanna and Western Railroad Company.

³ *Transcript of Record in Commodity Clause Cases*, p. 13. See Biblio. no. 157.

⁴ *Laws of Penn.*, 1855, no. 118.

⁵ *Laws of Penn.*, 1864, no. 345.

coal companies,"¹ the Steuben Coal Company — into which the Scranton Coal Company had already been merged — and the Granby Coal Company were consolidated on June 1, 1868, with the Nanticoke Coal and Iron Company.² The act of April 13, 1868, also authorized coal companies having coal lands and mining privileges in the counties of Luzerne and Schuylkill to merge their corporate powers "into any other company owning real estate in the same county, being a coal or mining company, or a coal and iron company, or a company having mining privileges."³ It was provided that the privileges of the companies so merged should be transferred to the company into which the merger was made. The Nanticoke Coal and Iron Company was, thereupon, merged into the Delaware, Lackawanna and Western Railroad on June 23, 1870,⁴ and the Lackawanna thereby secured the authority to own coal lands which had been conferred upon these coal companies. As the result of this policy of consolidation the Lackawanna by the end of 1870 had acquired some 17,000 acres of coal lands.⁵

The Delaware, Lackawanna and Western rapidly extended its transportation system likewise. In 1854 was completed the line provided for in its charter, extending from the New York and Pennsylvania boundary line southeasterly across the State of Pennsylvania to the Delaware river.⁶ An all-rail connection to tide-water was secured in 1856 through the use of the tracks of the Central Railroad of New Jersey across the State of New Jersey. In December, 1868, through the lease of the Morris and Essex Railroad, the Lackawanna secured an independent outlet to tide-water at Hoboken, and in the following year, through the lease of the Oswego and Syracuse Railroad, an outlet to the Lakes at Oswego was secured. An important adjunct to the Lackawanna system was the Lackawanna and Bloomsburg Railroad, extending from Scranton to Northumberland in the southwestern por-

¹ *Laws of Penn.*, 1868, no. 878.

² *Transcript of Record in Commodity Clause Cases*, p. 17. See Biblio. no. 157.

³ *Laws of Penn.*, 1868, no. 878.

⁴ *Transcript of Record in Commodity Clause Cases*, p. 17. See Biblio. no. 157.

⁵ *Ibid.*, p. 20.

⁶ *Ibid.*, pp. 13-14.

tion of the coal fields, and acquired by the Delaware, Lackawanna and Western Railroad in June, 1873.¹

The Lackawanna was soon followed in the coal fields by the Lehigh Valley Railroad Company,² which in 1855 began shipping from Wilkes-Barre in the Northern field to Phillipsburg on the Delaware river. In 1864 this road acquired the Beaver Meadow Railroad and Coal Company, organized in April, 1830, and in 1868 acquired the Hazelton Railroad Company, organized in 1836 under the name of the Hazelton Coal Company. Both of these companies had been authorized by law to mine, transport, and sell coal. The Lehigh Valley had not been authorized by its charter to conduct mining operations, but by the acquisition of these companies it became possessed of mining privileges, and, also, of some very valuable coal lands. These lands, together with those acquired through the purchase of the stock of a number of other coal companies, were later turned over to the Lehigh Valley Coal Company, a Pennsylvania corporation,³ the control of which the railroad acquired in November, 1875.⁴ In the extension of its railroad system the Lehigh Valley leased the Morris Canal and Banking Company in 1871, in order to secure an outlet to tide-water, but the canal proved inadequate, and the Easton and Amboy Railroad was built from Phillipsburg to Perth Amboy in 1875.⁵ An outlet to the Lakes was secured in 1869 through the Pennsylvania and New York Canal and Railroad Company, extending from Wilkes-Barre up the valley of the Susquehanna to the Pennsylvania and New York boundary line, where a connection was made with the Erie Railroad.⁶

¹ *Transcript of Record in Commodity Clause Cases*, p. 14. See Biblio. no. 157.

² Incorporated, Sept. 20, 1847, under the name of the Delaware, Lehigh, Schuylkill and Susquehanna Railroad.

³ *Transcript of Record in Commodity Clause Cases*, pp. 11-13, 15, 17. See Biblio. no. 159.

⁴ *Transcript of Record, Supreme Court of the United States*, Oct. Term, 1911. 6 vols. The United States, Appellant, v. The Reading Company, the Philadelphia and Reading Railway Company, *et al.*, iii, Exh. 57. Referred to hereafter as *Transcript of Record in Sherman Anti-Trust Case*.

⁵ *Chron.*, 12: 364 (1871); also 20: 570 (1875).

⁶ *Transcript of Record in Commodity Clause Cases*, p. 14. See Biblio. no. 159.

An additional extension of railroad facilities took place in the Wyoming and Lehigh regions during the latter part of the sixties and the early part of the seventies. The Pennsylvania Railroad, the Central Railroad of New Jersey, and the Erie Railroad all began the mining and shipping of coal.¹ It is not necessary to show in detail just how each of these railroads became possessed of mining interests. Suffice it to say that, as with the Lehigh Valley Railroad, none of them was authorized by its charter to conduct mining operations, but each of them between 1868 and 1873² (or possibly in the case of the Erie not until 1874) had secured control of coal mining companies, upon which, generally, very broad powers had been conferred.

This control of mining operations through the ownership of stock in coal mining companies was facilitated by an act of the Pennsylvania Legislature passed on April 15, 1869, which provided, "that it shall and may be lawful for railroad and canal companies to aid corporations authorized by law to develop the coal, iron, lumber and other material interests of this commonwealth, by the purchase of their capital stock and bonds, or either of them, or by the guarantee of or agreement to purchase the principal and interest or either of such bonds: *Provided*, That this act shall not apply to the stock and bonds of any corporation possessing mining or manufacturing privileges in the county of Schuylkill."³ This act is but one of many passed by the Pennsylvania Legislature conferring enormous powers upon corporations desiring to develop the coal interests of the state, and advantage of these privileges was freely taken by these corporations.

Previous to the passage of this act large purchases of coal lands had been made also by the Delaware and Hudson Canal

¹ The Central Railroad of New Jersey, connecting with the Lackawanna and the Lehigh Valley at the Delaware river, had, since the middle of the fifties, been one of the chief routes over which anthracite coal moved from the Delaware river to New York. The originating carriers, however, were securing independent outlets to tide-water. To protect itself, therefore, the Central Railroad of New Jersey, in 1871, leased the Lehigh and Susquehanna Railroad, thus originating its own coal traffic. See also pp. 35-36.

² See ch. 5.

³ *Laws of Penn.*, 1869, no. 33.

Company and by the Lehigh Coal and Navigation Company, both of which had already been authorized to buy coal properties. In 1867 the Delaware and Hudson bought several thousand acres of coal lands, and in 1869 through the purchase of the Northern Coal and Iron Company it secured an additional acreage.¹ About the same time large blocks of coal lands were purchased by the Lehigh Coal and Navigation Company.² By means of such a process of absorption the coal deposits of the Wyoming and Lehigh fields were largely consolidated by the early seventies under the control of the railroad and canal companies serving those regions.

In the Schuylkill or Southern field, however, conditions were fundamentally different. The Schuylkill Canal was begun without any connection with the coal trade, and the Company never acquired mining privileges. Likewise, the Philadelphia and Reading Railroad Company, chartered in 1833 and opened in 1842 over a route paralleling that of the Schuylkill Canal, confined itself for nearly thirty years exclusively to the business of transportation. The Reading having been chartered at a time when the Legislature was investigating the abuses consequent upon the conferring of mining privileges upon a transportation company, it was not to be expected that a grant of such powers would be given it. The hostility toward corporations in general and the feeling against bestowing upon them unusual privileges was much greater in the Schuylkill region, also, than in the two northern fields.³ And not possessing the right to mine coal itself, the Reading opposed all attempts upon the part of other corporations to secure from the Legislature a grant of such privileges. The production of coal in the Schuylkill field was thus carried on by operators independent, for the most part, of the transportation companies.⁴

¹ *Brief for the United States in the Sherman Anti-Trust Case*, p. 45. See Biblio. no. 156.

² *Annual Report of the Lehigh Coal and Navigation Company*, 1868, pp. 14-15.

³ For a discussion of the reasons for this greater hostility in the Southern region, see Virtue, *Anthracite Coal Industry*, pp. 12 *et seq.*

⁴ In that portion of the Schuylkill region constituting the Western Middle field, the Northern Central Railroad Company, now owned by the Pennsylvania Rail-

With the advent of Mr. Gowen to the Presidency in 1869 the policy of the Reading was completely changed. The reasons for the change in policy were indicated by President Gowen in his report to the stockholders:

The repeated and serious interruptions of the business of the Company, caused by strikes in the coal regions during the last few years, and the many fluctuations in the coal trade, produced by alternate periods of expansion and depression resulting therefrom, have directed the attention of the Managers of the Company to the necessity of exercising some control over the production of coal, so as to prevent a recurrence of the difficulties heretofore experienced; and it was believed that the best way of accomplishing this result without injuriously affecting individual interests, was for the Company to become the owner of coal lands situate upon the line of its several branches.¹

In addition there were, according to President Gowen, other factors which made the acquisition of coal properties advisable, if not essential. In the Wyoming region the mines were worked by the railroads, or by large coal companies. These, possessed of abundant capital, were able to adopt the most economical methods of mining. In the Schuylkill region, however, the lands were worked almost entirely by tenants, whose wasteful methods of mining tended to exhaust the mines, and threatened to deprive the Reading of its future tonnage. The adoption of measures to safeguard its future traffic was therefore imperative.² Furthermore, the monopoly of the traffic in the Southern field which the Reading had secured in 1870 through the lease of the Schuylkill Canal, was now threatened by the entrance of other carriers into its territory. The Pennsylvania Railroad, through the Northern Central Railroad, was entering the Schuylkill region from the west, and the Lehigh was entering it from the east. In addition, the Lackawanna, the Central of New Jersey, and the Lehigh, united in a corporation called the Union Railway Company, were locating a line through the heart of Schuylkill County, and were preparing to purchase coal lands in order to supply their new line with traffic.³

road, had acquired considerable areas of coal lands. Macfarlane, *Coal Regions of America*, p. 53.

¹ *Annual Report of the Reading Railroad*, 1871, p. 16.

² *Ibid.*, 1876, pp. 24-25.

³ *Ibid.*, p. 24.

In accord with its new policy, therefore, the Reading desired to acquire large coal properties. Under its charter, however, it possessed no authority to own coal lands. It therefore organized for that purpose the Laurel Run Improvement Company, which was incorporated by the Pennsylvania Legislature on May 18, 1871. This company, the name of which was later changed to the Philadelphia and Reading Coal and Iron Company, was given by the act of incorporation the power "to purchase, sell, transport, and mine coal," and to "acquire, from time to time, by purchase, lease, or otherwise, such lands as they may deem expedient"; and it was to be "lawful for the president and directors of said company to subscribe for and purchase the lands or stock of any other incorporated company in the State of Pennsylvania, and for any railroad or mining company existing under the laws of this state to subscribe for, or purchase the stock, or to purchase or guarantee the bonds of the company hereby incorporated."¹ The Reading immediately availed itself of these privileges, and purchased the total stock of the Philadelphia and Reading Coal and Iron Company.² By this means the railroad was in a position to accomplish indirectly that which it had not been authorized to do directly.

By the latter part of 1871 the Philadelphia and Reading Coal and Iron Company had secured about 70,000 acres of coal lands;³ and within the course of a few years it acquired 30,000 additional acres, which placed it in possession of approximately one-third of the coal lands of the whole anthracite basin.⁴ Had these purchases been made with a view toward systematically building up traffic and had they been paid for with stock, the Reading would not have suffered many of its later financial difficulties. But President Gowen soon undertook to control the entire coal production of the region reached by the Reading's lines in order to prevent any railroad from purchasing sufficient coal property to

¹ *Laws of Penn.*, 1871, no. 817.

² M'Henry, *Financial History of the Reading Railroad*, p. 12.

³ *Annual Report of the Reading Railroad*, 1871, p. 17. The report states that this acreage represents "a body of coal-land capable of supplying all the coal-tonnage that can possibly be transported over the road for centuries."

⁴ *Annual Report of the Reading Railroad*, 1874, p. 29.

warrant the construction of a rival line. Hence all kinds of property, good, bad, and indifferent, seem to have been purchased without regard to original cost, location, or revenue-producing capacity,¹ — these purchases being paid for mainly by borrowed funds. The increased interest charges constituted an enormous drain on the finances of the Reading. Furthermore, the purchases were made at an unfortunate period. The panic of 1873 and the resulting depression forced the Reading, in 1880, into receivers' hands. Its financial embarrassment for some years following prevented it from securing the proportion of the trade to which its property, secured at such great cost, entitled it.

These purchases of coal lands by the Reading on such an enormous scale had the effect of stimulating the purchase of additional properties by the other railroads serving the coal fields, each railroad endeavoring to assure its own traffic for the future. This movement went to such extremes as to arouse the conviction on the part of the people that it must in some way be checked. Accordingly there was inserted in the Constitution which went into effect January 1, 1874, having been adopted by a large majority, a provision that

No incorporated company doing the business of a common carrier shall, directly or indirectly, prosecute or engage in mining or manufacturing articles for transportation over its works; nor shall such company, directly or indirectly, engage in any other business than that of common carriers, or hold or acquire lands, freehold or leasehold, directly or indirectly, except such as shall be necessary for carrying on its business; but any mining or manufacturing company may carry the products of its mines and manufactories on its railroad or canal not exceeding 50 miles in length.²

The delegates to the Convention seem to have clearly recognized the evils inherent in the system of granting a railroad the privileges of mining. The Constitution was not productive, however, of any very effective results. In spite of its prohibitions the railroads already in the field increased their holdings of coal lands and the railroads which entered the coal fields after the adoption of the Constitution did not find it any serious bar to the acqui-

¹ *Annual Report of the Reading Railroad*, 1881, p. 62.

² Penn. Const., cited in *Laws of Penn.*, 1874, p. 24.

tion of coal lands, although they might be compelled to resort to the organization of a subsidiary coal company.

The effect of these extensions of railroad transportation upon the business and the profits of the already existing canal companies requires a brief consideration. As we have seen, up to 1834 canals constituted practically the only outlets to tide-water for anthracite coal, and even until 1850 they were the dominant factors in the transportation of coal to market. In the fifties there was a rapid extension of railway facilities. This competition does not seem, up to the close of the Civil War, to have materially affected the prosperity of the anthracite canals. The Delaware and Hudson Canal Company was uniformly prosperous during the twenty years preceding the Civil War, and notably so during the War, its profits averaging nearly 30 per cent during the years 1863-1865.¹ The Lehigh Coal and Navigation Company earned on the average nearly 14 per cent during the years 1860-1862, and regularly paid 6 per cent dividends. In 1863, despite the fact that its canal was severely damaged through storm, the Company reaped a greater profit than it had in any preceding year. The next two years also were very prosperous ones, the company even being unable to handle the large amount of traffic which was offered. The dividend rate was increased from 6 per cent in 1863 to 8 per cent in 1864, and to 10 per cent in 1865, while earnings during these three years averaged nearly 30 per cent.² The Morris Canal up to the middle of the century had not been a factor of any considerable importance in the coal trade, but a number of improvements were made during the fifties, which placed it in a position to share in the prosperity of the Civil War period. Its dividends rose in 1866 to the highest point attained in the history of the company. The Schuylkill Navigation Company had had a monopoly of the coal trade of the Schuylkill Valley until 1842, the year in which the Reading Railroad entered the Southern coal field. Bitter competition between the two companies lasting for several years left them

¹ Jones, C. L., *Anthracite Tidewater Canals*, pp. 81, 87. This book is the chief authority for the following account of the anthracite canal systems during this period, and is referred to freely.

² *Annual Reports of the Lehigh Coal and Navigation Company.*

both financially exhausted by the end of the decade. This induced the railroad and the canal to agree to work together. By 1855 the canal was again paying dividends for the first time in thirteen years, and by 1859 its managers were able to say with reason that the canal had demonstrated its ability to compete with the railroad for the coal trade. The Schuylkill Navigation Company suffered during the early years of the war, from a number of causes, but during the latter part of the Civil War period made very large profits. The only exception to the prosperity of the principal anthracite canals during this period was the Delaware Division Canal, owned by the State of Pennsylvania. This company had been unfortunate from the beginning in having locks which were too small. The inability of the canal to handle the trade was continuously demonstrated, yet no steps were taken to introduce improvements. In 1854 the Lehigh Valley Railroad was about to enter into competition for the carrying trade. The canal, in spite of its limitations, was paying good dividends at this time, yet it was evident that it could not compete with the railroad unless considerable improvements were made. The plan for improving the canal did not, however, receive sufficient legislative support, and in 1858 the State sold the canal to the Sunbury and Erie Railroad. A separate company, the Delaware Division Canal Company of Pennsylvania, was organized to operate the canal. This company could not agree with its connections on a division of the tolls, and suffered, also, from damages to the Lehigh Canal, the main source of its traffic. It did not share, therefore, as did the other companies, in the prosperity of the Civil War period. Competition proved too keen, and in 1866 the Company leased all its properties to the Lehigh Coal and Navigation Company, a rival canal company.

With the exception, then, of the Delaware Division Canal, the main coal-carrying canals were profitable up to the end of the Civil War period, and competed successfully with the railroad systems. The inability of the Delaware Canal to withstand the competition indicates little as to the relative merits of the railroads and the canals. It was claimed at the time that discrimination by the Lehigh Navigation Company was to a large extent the

cause of its diminished coal tonnage. When it finally succumbed to competition in 1866, it was purchased, not by a railroad company, but by a rival canal company, the Lehigh Coal and Navigation Company, whose canal formed a connection with the Delaware Canal.

In the latter part of the sixties and in the early part of the seventies railroad competition became more severe by the entrance of a number of other coal-carrying roads into the anthracite field. Within the next ten years the anthracite canals had either been transferred to the railroads, or had so transformed the character of their business by the building of railroads, or by the development of their mining interests, that the canals became of less and less importance as transportation agencies. The first to succumb to the competition of the railroads was the Schuylkill Navigation Company. This company had had more or less of a working agreement with the Reading Railroad for some years previous to 1863. In that year closer relations were established. An agreement was made dividing the coal tonnage between the two companies in certain agreed proportions, and equal freight charges were established. The arrangement, however, proved mutually unsatisfactory, and during 1867-1869 competition became so keen, and the market for coal so depressed, that on July 12, 1870, the Schuylkill Navigation Company leased all its property to the Reading, which thereby secured a monopoly of the traffic in this field.¹ The Reading proposed at first to use the canal to catch the overflow from the railroad, but found it more profitable as time went on to add new railroad facilities than to rehabilitate the canal. The canal traffic is now of minor importance. Whereas in 1869, the year prior to the lease, over 1,000,000 tons of freight, mainly anthracite, moved by the canal, in 1911 the total tonnage was only 72,600, all of which was anthracite coal. Above Port Clinton the canal has been abandoned for many years.²

¹ *Annual Reports of the Schuylkill Navigation Company*, and *Annual Report of the Reading Railroad*, 1870, p. 22.

² *Annual Reports of the Schuylkill Navigation Company*, and *Files of the Pennsylvania State Railroad Commission*, ii, pp. 483-484. See Biblio. no. 96.

The Morris Canal Company had reached the height of its prosperity in 1866. In that year, however, the Morris and Essex Railroad¹ began carrying coal from a portion of the territory adjacent to the canal. Improvements were undertaken by the Canal Company to enable it to meet this competition, but a rate war made it necessary to lower tolls, and profits soon disappeared. This induced the Morris Canal Company, early in 1871, to lease all its property to the Lehigh Valley Railroad for ninety-nine years. The canal soon became of only secondary importance in the operations of the railroad, what traffic there was being primarily local trade. About the same time (1871) the Pennsylvania Railroad secured control of the Delaware and Raritan Canal,² which had been constructed in the middle of the thirties, extending from Trenton on the Delaware river across the State of New Jersey. In the same year the Reading leased the Susquehanna Canal, which extended from Columbia to the tide-water of the Chesapeake Bay, and formed, with the Reading and Columbia Railroad, an outlet for the output of the western part of the Schuylkill coal fields.³

The lease of the Delaware Division Canal to the Lehigh Coal and Navigation Company in 1866 has been noted.⁴ The Navigation Company likewise felt the competition of the railroads, and endeavored to protect itself by meeting them on their own ground. Loans were made to several small railroads to enable them to connect with the Navigation Company's Railroad, and an extension of the Lehigh and Susquehanna Railroad was determined upon. In 1867 the Lehigh and Susquehanna Railroad was put in operation from Wilkes-Barre to Mauch Chunk,⁵ and in the following year it was completed to Phillipsburg on the Delaware river,⁶ — where connection was made with the Central Railroad of New Jersey and with the Morris and Essex Railroad. An outlet to New York by rail was thus secured. About the same

¹ Leased to the Lackawanna Railroad in 1868. See p. 25.

² *Manual of Statistics*, 1912, p. 309.

³ *Annual Report of the Reading Railroad*, 1871, p. 20.

⁴ See p. 33.

⁵ See pp. 23-24.

⁶ *Annual Report of the Lehigh Coal and Navigation Company*, 1868, p. 7.

time the company made large purchases of coal lands,¹ and entered into contracts with a number of coal companies whereby tonnage was guaranteed to the railroad. By the latter part of the decade the railroad and mining operations constituted the chief interests of the company, the canal having become of secondary importance. Yet in spite of these improvements, which the Coal and Navigation Company undertook in order to be in a position to compete with the railroads, the outlook at the close of the decade was gloomy. The credit of the Company had become exhausted, as the result of its numerous extensions, and its income had been materially reduced by strikes, freshets, and rate wars. There was danger, also, that the Central of New Jersey would ally itself with opposing interests, and leave the Lehigh and Susquehanna without an outlet to New York. To protect itself against this contingency the Lehigh Coal and Navigation Company on March 28, 1871, leased all its railroad properties to the Central of New Jersey, giving an option, also, on the canal, including the Delaware Division.² The Navigation Company then turned its attention to the development of its canal and coal interests. The canal was much improved, and the coal properties of the company considerably increased.³ The panic of 1873, however, made it impossible for the company to hold all its coal lands, and in December of that year it sold its coal lands in the Wyoming region to the Honey Brook Coal Company (controlled by the Central of New Jersey), and leased its coal lands in the Lehigh region to the same interests. The Central of New Jersey contracted, also, for the maintenance and operation of the canal, thus securing practically all of the Navigation Company's property.⁴ But in a period of severe industrial depression the Central of New Jersey was unable to meet the heavy obligations incurred, and in 1876 went into receivers' hands. In January, 1878, it returned to the Navigation Company all of its properties with the exception of the railroad.⁵ Yet even under the Navigation Company's own management the traffic on the

¹ *Annual Report of the Lehigh Coal and Navigation Company*, 1868, pp. 14-15.

² *Ibid.*, 1871, pp. 31-32, 34, 37.

³ *Ibid.*, 1872, p. 11.

⁴ *Ibid.*, 1874, pp. 8-9.

⁵ *Ibid.*, 1878, p. 7.

canal declined, and the coal and railroad interests became of greater importance.

The later course of development of the Delaware and Hudson Canal Company was similar to that of the Lehigh Navigation Company. Up to the middle of the sixties the Delaware and Hudson had been a canal and coal company, but about this time the competition of the railroads began to be keenly felt, and a large part of its coal tonnage was lost to a competing railroad. To meet this competition, the company changed its policy. It rapidly developed its transportation facilities through the construction of new lines and the lease of old ones, and it likewise made large purchases of coal lands. The company thus became primarily a railroad owning a canal and coal mines. The canal was becoming, however, of decreasing value. Its importance was so slight by 1872 that in that year the statistics of canal traffic disappeared from the reports of the company. In 1899 the canal was definitely abandoned, and the name of the company changed from "The Delaware and Hudson Canal Company" to the "Delaware and Hudson Company."¹

From this brief consideration of the anthracite canal systems during the period 1834 to the middle of the seventies, the success of the railroads in displacing the canals as the dominant transportation agencies is apparent. The canals either passed into the hands of the railroad companies, or extended their railroad and mining interests so that they no longer became dependent upon the operations of the canal. Only one canal, that of the Lehigh Coal and Navigation Company, and its feeder, the Delaware Division Canal, is now in operation throughout its whole length, and the traffic on this canal is comparatively small. It does not fall within the scope of the present study to enter upon a discussion of the relative merits of canal and railroad transportation or to enquire whether the canals may not at some time be again profitably utilized.

¹ *Chron.*, 68: 871 (1899); also 69: 26 (1899).

GROWTH OF THE TRADE

As the result of the rapid extension of transportation facilities between 1834 and 1873, of the opening of many new mines, and of the increased demand for anthracite consequent upon the growth of population and a more general recognition of the value of hard coal as fuel, the anthracite coal trade experienced a considerable growth during this period. From 1834 to 1842 the growth was gradual, the shipments increasing from 376,000 tons in 1834 to over 1,000,000 tons in 1842.¹ Inasmuch as navigation was closed during that part of the year when the demand for anthracite for domestic purposes was greatest, a very rapid growth could not have been expected. In 1842, however, the Reading Railroad entered the Southern coal field, and removed the difficulties incident to intermittent navigation, so far as that field was concerned. About 1840, also, anthracite began to be used to a greater extent in manufactures, especially in the manufacture of iron,² and was successfully used also on steamboats.³ These factors taken in connection with the speedy growth of population after 1840, and the decrease of the forests, presented conditions favorable for a more rapid growth of the trade. The shipments, which had been about 1,000,000 tons in 1842, had doubled by 1845, and had trebled by 1848. There was an uninterrupted increase until 1856, when nearly 7,000,000 tons were sent to market. There was a slight decline in 1857 as the result of the depression in trade following the panic of that year, but by 1860 the amount of coal shipped to market had reached 8,500,000 tons. In 1861 there was again a decline, which was not recovered in 1862, for in this year a destructive flood in the Lehigh region necessitated a temporary suspension of operations. Under the impulse given by the war, however, the market two years later (1864) absorbed for the first time 10,000,000 tons. After a slight decline in 1865, due largely to a strike in the Wyoming region, a speculative era set in which resulted in an over-develop-

¹ See Appendix, Table I; also chart, p. 99.

² F. W. Taussig, *The Tariff History of the United States*, pp. 128 *et seq.*

³ Hunt's *Merchants Magazine*, iv, p. 286.

ment of the mines. The shipments reached 16,000,000 tons in 1870 and over 21,000,000 tons in 1873.

The growth of the coal trade during this period was accompanied by marked changes in the comparative development of the different regions. Toward the close of the period ending in 1834, the Schuylkill field was mining about 60 per cent of the total production, the Lehigh field was normally contributing about 25 per cent, and the Wyoming field about 15 per cent.¹ The production of the Schuylkill field, however, experienced a steady, though not a uniform, relative decline, and by the close of the period ending in 1873 the shipments from this region constituted only about one-third of the total. The declining importance of the Southern field may be explained in two ways. First, the opening of new lines of transportation from the other fields to New York gave these an advantage, because of the importance of New York as a centre of trade. Second, the upper veins lying above water level began to fail in both the Schuylkill and Lehigh fields, which made it cheaper to mine from the flat workings of the Wyoming field than from the steeply dipping seams of the two other fields. This second factor explains the relative decline in the output of the Lehigh region. In 1834 it had yielded approximately 25 per cent of the total, whereas by the early seventies its percentage had dwindled to 20 per cent. It was the opening of new transportation routes which prevented the decline from being as great in this region as it was in the Southern region. The greatest growth of the trade came in the Wyoming region. Whereas in the early thirties the Wyoming field produced only about 15 per cent of the total shipments, by the early part of the seventies it was contributing about 45 per cent, and its relative importance was to become even greater in the succeeding years.

¹ See Appendix, Table I; also chart, p. 103.

CHAPTER III

THE COMBINATIONS FROM 1873 TO 1898¹

EARLY in 1873 the first combination to control the anthracite coal trade was formed. Combinations of various kinds entered into for the purpose of curbing or eliminating competition are the distinguishing features of the third period, 1873 to 1898.

Many years previous to the combination in 1873 the producers of anthracite had coöperated to some extent to curtail the output of coal, but these attempts at curtailment had been only local and temporary. Conditions were radically changed, however, by the Civil War. The industry received a stimulus through the demands created by the war, and the price of lump coal rose rapidly from \$3.39 in 1861 to \$8.39 in 1864.² Profits were abnormally large, and as a result many new collieries were opened, and railroads were extended to them. This resulted in an over-development of the mines. By 1867 the markets were overstocked, and prices fell to a very low level. The price of lump coal, which had been \$7.86 in 1865, fell in 1867 to \$4.37, and in 1868 to \$3.86.³ The operators then reduced wages, but in 1869 the miners protested against further reductions. They held that the trouble was over-production, and that the way to meet the situation was a restriction of production rather than a reduction of wages. Accordingly in April, 1869, the Executive

¹ In the *Quarterly Journal of Economics* for April, 1896, Mr. G. O. Virtue has described admirably the early anthracite combinations. Liberal use has been made of his work in the description of the combinations from 1873 to 1891.

² Wholesale price per long ton, f. o. b., Philadelphia. *Mineral Industry*, iv, p. 184.

Lump coal is coal as it comes out of the mine. It is the largest size of anthracite, and was at one time the size most in use. At the present time lump coal is generally broken up into a number of smaller sizes which are more in demand for domestic and industrial purposes. These sizes are grate (broken), egg, stove and chestnut, called the domestic or prepared sizes, pea which formerly was used primarily for industrial purposes but is now coming more into use as a domestic fuel, and buckwheat, rice and barley called the steam sizes which come into direct competition with bituminous coal. The steam sizes and the dust (culm) are by-products of the larger sizes.

³ *Ibid.*

Committee of the Workingmen's Benevolent Association, of which nearly all the workingmen in the coal region were members, announced a suspension. After the surplus had been disposed of, work was resumed at the old wages. Suspension was then regularly resorted to as a remedy for over-production. This state of affairs, viz., an unprofitable trade, and a united labor organization, practically able to dictate the conduct of the business, made imperative united action on the part of the large operators.¹ Such action became feasible, however, only with the advent of the Reading as the owner of the greater part of the Southern field, and the consequent elimination of many of the smaller and independent operators, who in their desire to make large immediate profits had sacrificed the chance of future gains.

After the preliminary negotiations in 1872, the first combination was formed on January 22, 1873,² probably the first instance of a trunk line pool. It was a combination of carriers rather than of producers.³ No limitation was placed upon each railroad's

¹ Virtue, *Quart. Jour. Econ.*, April, 1896, pp. 299-300.

² Labor Troubles in the Anthracite Regions of Pennsylvania, 1887-88. 2d Sess., 50th Cong., House of Repres. Report, no. 4147, p. xlv. Referred to hereafter as *House Report*, 1887-88, no. 4147.

³ The table¹ below shows the division of the tonnage among the companies in 1873 and in the other years during which an agreement was in force:—

Roads	1873-75	1876	1878	1885	1886	1896
	%	%	%	%	%	%
P. & R.....	25.85	25.57	28.625	38.85	37.82	20.50
C. R. R.....	16.15	15.98	12.905			11.70
L. V.....	15.98	15.80	19.75	19.60	19.07	15.65
Lackawanna.....	13.80	13.65	12.75	16.05	15.63	13.35
D. & H.....	18.37	18.18	12.48	11.00	10.70	9.60
Penn. Coal Co.....	(9.85)	10.82	5.865	5.00	4.87	4.00
Penn. R. R.....	.....	.....	(7.625)	(8.00)	(10.45)	11.40
Erie.....	.....	.....	.....	(1.50)	1.46	4.00
Ontario ².....	.....	.....	.....	.....	.....	3.10
D. S. & S. ³.....	.....	.....	.....	.....	.....	3.50
N. Y. S. & W. ⁴.....	.....	.....	.....	.....	.....	3.20

Figures in parentheses represent probable tonnage of companies not members of the pool.

¹ For percentages see the *Commercial and Financial Chronicle* of the year in which the agreement was adopted.

² See p. 64.

³ See p. 86. The Delaware, Susquehanna and Schuylkill Railroad did not accept the allotment, but worked throughout the year on the basis of 4 per cent to which it held it was entitled.

⁴ See p. 59.

output, but the amount of coal shipped to competitive points — that is, to tide-water points — was to be regulated. An estimate was made of the probable demand at the tide-water points, and the output thus determined was divided among the companies, according to the capacity of the mines shipping their coal over the respective lines. A schedule of tide prices was agreed upon, and a Board of Control, composed of the presidents of the railroads, was authorized to make such changes in the price of coal and in the amount which was to be shipped to tide-water as were deemed necessary.

This agreement was continued in the following three years, but with some slight changes. In 1874, for instance, power was given to the Board of Control to inspect the sales and tonnage books of the various companies, as a check upon the observance of the agreement. In 1875 the auction sales of the Lackawanna Railroad, which had been strenuously objected to by the other producers, were prohibited.¹ Sales on commission were abolished by the agreement of 1876, and all sales thenceforth were to be on a cash basis with 7 per cent interest added in case of deferred payment. A significant feature of the agreement for this year was the provision that any railroad exceeding its allotment was to pay \$1.50 for every ton shipped in excess of the tonnage allotted to it, which sum was to be given to the railroad falling short of its allotment. There were slight changes in the percentages, each company, with the exception of the Pennsylvania Coal Company, which for the first time entered the combination, accepting a lower percentage. It was provided also, “that each transporting company be held responsible for the faithful adherence to these regulations on the part of all individual shippers using its lines to carry coal to competitive points.”² The observance of these regulations was effectively secured by means of the withholding of cars.³ The Board of Control was given the power to employ an expert accountant to keep the tonnage accounts of the several

¹ Virtue, *Quart. Jour. Econ.*, April, 1896, pp. 301-303.

² *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 152.

³ Pettit, S. W., *Argument before the Investigating Committee of the Pennsylvania Legislature*, 1875, p. 73.

companies.¹ Mr. John H. Jones, an employee of the Reading, was appointed to this position, and started the Bureau of Anthracite Coal Statistics, which kept the records of the shipments of each company to competitive points, and after 1880 the records, also, of local tonnage.² The Pennsylvania Railroad, as before, was not a member of the pool. Its coal tonnage was largely supplied to the South and West, and it was not, therefore, so vitally interested in harmonious action with respect to tide-water tonnage.³ President Scott, however, agreed that the shipments of the Pennsylvania Railroad to competitive points in 1876 should not exceed those of 1875, and agreed, further, to maintain prices, as theretofore, provided the coal association was continued, as in the previous year.⁴

A penalty was provided in order to prevent violations of the agreement. There was, however, no legal means of collection.⁵ As a result the percentages allotted were not adhered to. The Lehigh Valley, especially, exceeded its allotment, carrying in 1876 nearly 24 per cent of the total shipments of the railroads which had entered into the agreement, or nearly 8 per cent in excess of the amount to which it was entitled.⁶ The Pennsylvania Railroad continued to act independently of the other companies. At the end of April, 1876, a resolution was passed that the association be dissolved, but upon the Lehigh Valley pledging itself to abide by the agreement the association was continued.⁷ On August 21 of the same year, at a meeting of the coal interests, President Gowen of the Reading charged that the Lehigh Valley had not taken the requisite steps to equalize by reducing production, and his motion that the association be dissolved was unanimously adopted.⁸ Auction sales were at once announced.⁹ As a

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 152.

² *Ibid.*, ii, pp. 591-592.

³ *Annual Report of the Pennsylvania Railroad*, 1877, p. 31.

⁴ *Ibid.*, 1876, p. 39.

⁵ *Morris Run Coal Company v. The Barclay Coal Company*, 68 *Pennsylvania Reports*, 173 (1871).

⁶ See pp. 41, 148.

⁷ Meeting of Philadelphia and Reading Share and Bondholders, June 6, 1877, p. 133.

⁸ *R. R. Gaz.*, 8: 371 (1876).

⁹ *Ibid.*

result prices fell very low, the average wholesale price for the sizes of coal from lump to pea falling from \$4.92 in July to \$4.05 in August, and to \$3.61 in September.¹ An effort was soon made to bring about a renewal of the agreement, but this was not successful until sixteen months of competition had brought home to the carriers the advantage of concerted action.

So far as the effect of the agreements of 1873-1876 on prices is concerned, it is clear that prices were considerably higher during the years of combination than they had been in 1872 (though not quite so high as they had been in 1870 and 1871), and that they remained much steadier throughout the year.² Yet the combination could hardly be said to have been altogether successful. Those companies, such as the Pennsylvania Railroad, which did not join the combination profited by the restriction and the higher prices without having to make any considerable sacrifices. But this was at the expense of the companies which were in the combination. The Reading, for example, was allotted only 25.5 per cent in 1876, whereas the following year under free competition it carried nearly 33 per cent.

After the dissolution of the association in August, 1876, the coal trade was uncontrolled until January, 1878. This competition proved disastrous. The production of coal increased considerably, the shipments rising from 18.5 million tons in 1876 to 20.8 million tons in 1877.³ Prices, also, fell very low. The average for all sizes, which had been \$4.11 in 1876, fell in 1877 to \$2.44.⁴ The effect on the dividends of the anthracite carriers was marked. In 1877, at least four of the important transportation companies, each of which had been paying liberal dividends for several years, suspended their dividend payments, and several others reduced their customary rates. As a result the companies were ready early in 1878 to combine again.

¹ See Appendix, Table IV; also chart, p. 45. These prices, it will be noted, are not comparable with those for lump coal.

² See Appendix, Table IV; also chart, p. 45.

³ See Appendix, Table I.

⁴ See Appendix, Table IV; also chart, p. 45.

Price
per ton
(2,240 lbs)

\$ 6.00

\$ 5.50

\$ 5.00

\$ 4.50

\$ 4.00

\$ 3.50

\$ 3.00

\$ 2.50

\$ 2.00

\$ 1.50

\$ 1.00

\$ 0.50

\$ 0.00

'71

'72

'73

'74

'75

'76

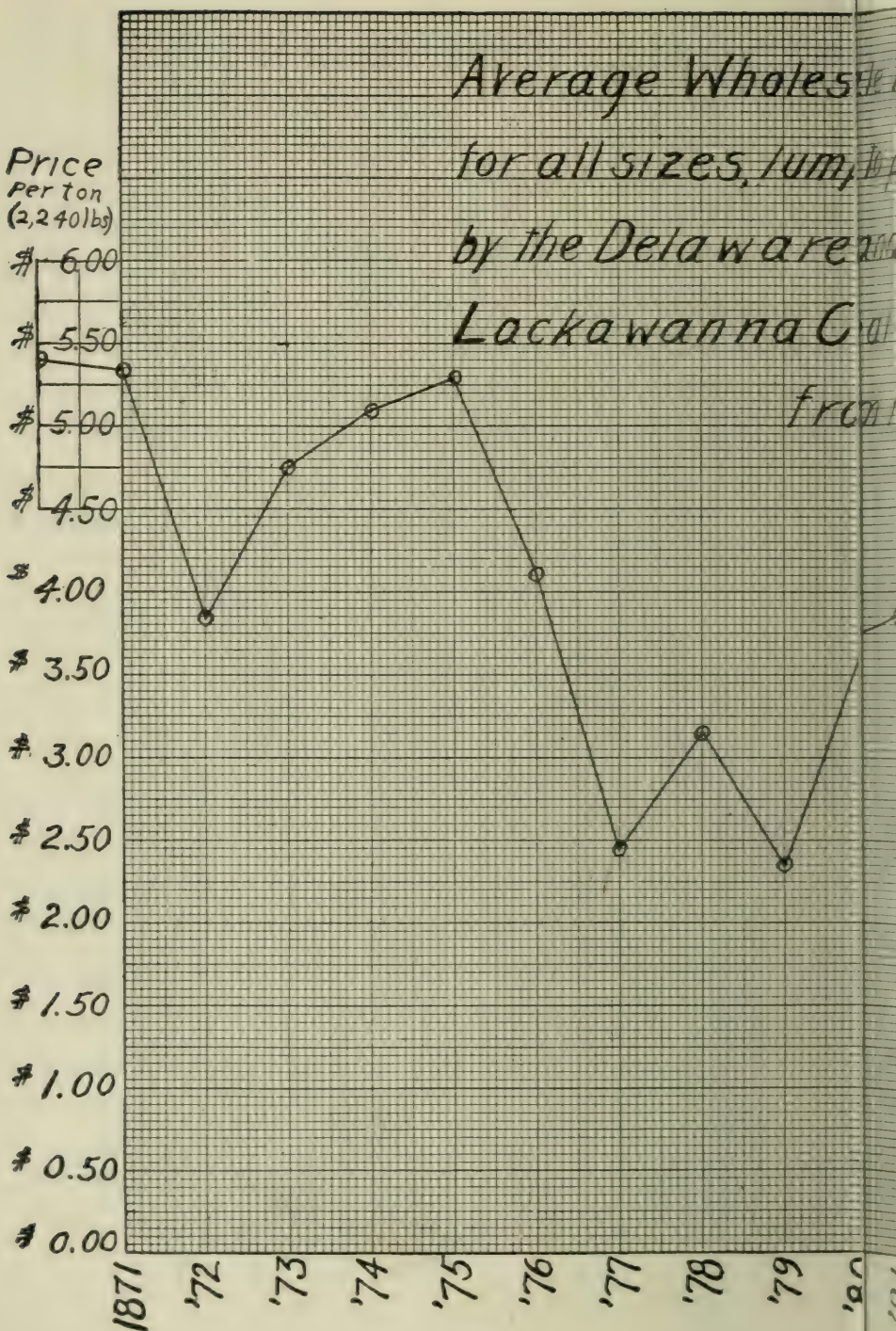
'77

'78

'79

'80

Average Wholesale
for all sizes, lump, by
the Delaware
Lackawanna Coal
from



le Prices of Anthracite Coal
to pea, actually received
and Hudson Canal Co. for
Coal f.o.b. New York Harbor
on 1870 to 1891

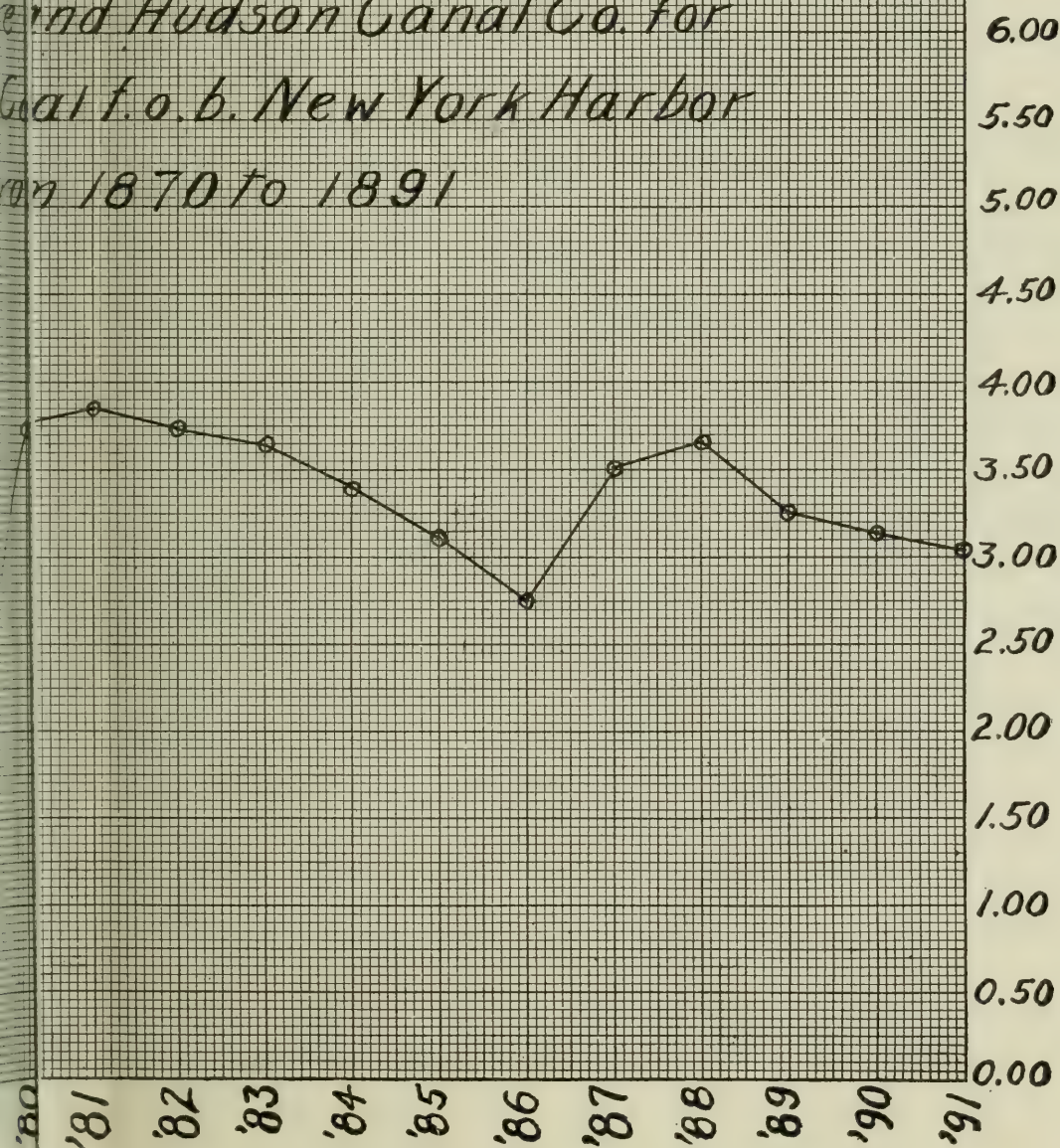


CHART I

An agreement¹ was reached early in January, 1878. Several new features were introduced. Control was to be exercised over all tonnage, instead of, as theretofore, merely over the tide-water tonnage. The fixing of prices, however, was left to each company, but it was recommended that the agents of the coal companies constitute a coal exchange by occupying one room. The method of voting was modified so as to give the representative of each company on the Board of Control a voting power in proportion to the tonnage allotted to his company. A change in the method of collecting the penalty was introduced. Each company was to pay weekly to the Board of Control 15 cents for every ton of coal mined, which was to constitute a fund out of which was to be paid the prescribed penalty of \$1.25 for every ton shipped in excess of the monthly quota.² Changes were made, also, in the percentages allotted to the different railroads.³

The terms of the agreement seem to have been, on the whole, well kept. The shipments of coal were three million tons less than they had been in 1877,⁴ and each railroad adhered rather closely to the percentage allotted to it.⁵ Nevertheless, there was dissatisfaction. Many concessions had been made, the Reading securing only 28.6 per cent, whereas it had demanded 31 per cent. The allotment was not expected to last long, as the Lehigh Valley had refused to ratify the agreement to extend throughout the winter.⁶ Trade, therefore, was dull throughout the year, the public waiting for the expected break and the consequent fall in prices.⁷ In October, the Lehigh Valley refused to sign a new agreement,⁸ and in the following month it announced its decision to withdraw from the pool on December 31. The combination, therefore, was dissolved at the end of the year.

¹ For a tabular view of the main provisions of the agreements, 1873-96, see Appendix, Table VI.

² *Chron.*, 26: 108 (1878).

³ See p. 41.

⁴ See Appendix, Table I.

⁵ See pp. 41, 148.

⁶ *Annual Report of the Reading Railroad*, 1878, p. 26.

⁷ *Ibid.*, p. 27.

⁸ *R. R. Gaz.*, 11: 545 (1879).

During the following year, 1879, several attempts were made to come to an agreement, but without success.¹ Each company mined coal without any restriction,² and the shipments for the year were 26.1 million tons, which was 8.5 million tons in excess of those in 1878, and 5 million greater than they had ever been before. The price of coal, which had been \$2.44 in 1877, and had risen to \$3.15 in the year of the agreement, fell in 1879 to \$2.34, which was the lowest it had been in many years.³ The freight rates on coal, also, were the lowest in the history of the industry.⁴ Partly because of these conditions such important companies as the Lackawanna Railroad, the Delaware and Hudson, the Central of New Jersey, the Reading, and the Lehigh Coal and Navigation Company failed in 1879 to pay any dividends.

In the closing months of 1879, however, prices began to rise,⁵ and a period of general prosperity set in, which lasted four years. During the whole of this time, probably there was no formal agreement for the regulation of the trade, no allotment of percentages, nor any maximum tonnage for the year. There was, however, "a friendly understanding among the companies,"⁶ which resulted in a combination, perhaps as effective as a formal agreement.⁷ If a weakening market gave indication of an overproduction of coal, all work for a certain number of days was suspended by mutual consent.⁸ During 1880 the production of coal was restricted 88 days,⁹ and during the six months, December, 1883, to May, 1884, inclusive, production was restricted as many as 63 days in all.¹⁰ This plan was further strengthened in April, 1884, by leaving the question of restriction to the com-

¹ *Annual Report of the Reading Railroad*, 1879, p. 29.

² *Ibid.*, 1881, p. 26.

³ See Appendix, Table IV; also chart, p. 45.

⁴ *Annual Report of the Reading Railroad*, 1880, p. 29. See also *Annual Report of the Lehigh Coal and Navigation Company*, 1880, p. 3.

⁵ See Appendix, Table IV; also chart, p. 45.

⁶ *Annual Report of the Reading Railroad*, 1881, p. 26.

⁷ The lease of the Central Railroad of New Jersey by the Reading Railroad naturally helped to promote this "friendly understanding."

⁸ *Chron.*, 39: 196 (1884).

⁹ *Annual Report of the Reading Railroad*, 1881, p. 26.

¹⁰ *Chron.*, 38: 662 (1884).

panies having the majority of tonnage.¹ No agreement to maintain prices seems to have been made, but each company was expected to adhere to its circular, the circulars being made by each company, but usually after consultation with the other interests.²

This restrictive policy was followed with great success from 1880 to 1884. It was a period of rapid extension of the industry. The shipments of coal rose from 23.4 million tons in 1880 to 30.7 million in 1884,³ and this notwithstanding a cessation of operations for 107 days in 1884. Prices were regarded as fairly satisfactory, and were certainly much higher than in 1879.⁴ The dividends of the anthracite carriers, also, were rather generally increased. Yet, though the plan of periodical restrictions worked well during these years, it was defective as a means of solving the problem of over-production. This plan made it to the interest of every company to produce as much as it possibly could in the days allotted to work, and consequently put a premium upon the opening of new collieries. As this enlarged the productive capacity of each company, the number of idle days had to be greatly increased, yet the annual production continued to mount up. This fundamental weakness of the policy of restriction was intensified by the industrial depression of 1884, and it became clear to the companies that some other method of regulating the trade must be adopted.

After several preliminary meetings, a pool was again formed December 31, 1884. A total production of 30 million tons for the year (1885) was agreed upon. The monthly production was to be determined by the Board of Control according to the requirements of the market, and was to be divided among the companies on the basis of the percentages agreed upon for the year.⁵ These percentages, it was stated, were to be observed in both the production and the transportation of coal,⁶ each railroad

¹ *Chron.*, 38: 479 (1884).

² Virtue, *Quart. Jour. Econ.*, April, 1896, p. 310.

³ See Appendix, Table I.

⁴ See Appendix, Table IV; also chart, p. 45.

⁵ *House Report*, 1887-88, no. 4147, p. 639. For percentages see p. 41.

⁶ Mr. Harris, *House Report*, 1887-88, no. 4147, p. li.

dividing its allotment among its shippers, and thereby controlling their production.¹ There were no penalties for the violation of the agreement; the companies simply agreed to limit themselves to the proportion allotted to them. No stipulation in regard to prices was made. The agreement was to continue until March 31, 1886.² Earnest attempts were again made to induce the Pennsylvania Railroad to join the pool, but it refused to do more than act in general harmony with the other interests in regard to the price of coal.³ The combination was not, however, sufficiently liberal to the Pennsylvania to secure its adhesion. It was offered only 8 per cent of the total production, or 2.4 million tons, yet the previous year it had carried 3.1 million tons. The Pennsylvania, furthermore, was rapidly extending its system, and was thus in a position to carry an even larger tonnage.⁴ The refusal of the Pennsylvania Railroad to join the pool proved to be a demoralizing factor. This railroad carried in the course of the year nearly 3 per cent more than the other companies had allotted it. All the companies which had entered into the agreement, with the exception of the Erie, fell behind, — the Philadelphia and Reading and its leased railroad, the Central of New Jersey, suffering the greatest loss.⁵ Prices, which had fallen slightly since 1881, took a decided drop in 1885, and fell especially low during the last months of the combination.⁶

In spite of the dissatisfaction, however, the agreement was renewed. At a meeting held at the home of Mr. J. P. Morgan, March 22, 1886, the necessity for concerted action was brought out by Mr. Morgan.⁷ Among other reasons, harmony was necessary in order to effect an enduring reorganization of the Reading, which had failed in 1884. An agreement was reached at a meeting of the presidents of the coal companies, April 5, 1886.⁸ The

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 145.

² *Chron.*, 40: 27 (1885).

³ *House Report*, 1887-88, no. 4147, p. 649.

⁴ *Chron.*, 40: 40 (1885).

⁵ See p. 148.

⁶ See Appendix, Table IV; also chart, p. 45.

⁷ *House Report*, 1887-88, no. 4147, p. lii.

⁸ *R. R. Gaz.*, 18: 253 (1886).

output for the year April 1, 1886, to March 31, 1887, was to be 33,500,000 tons to be divided among the railroads in certain agreed percentages.¹ The Pennsylvania Railroad was assigned 3,500,000 tons. It named this amount as its probable tonnage, but remained outside the pool, and did not bind itself to make any reduction should the other companies decide to reduce the total production below 33,500,000 tons.² The penalty for shipment in excess of the allotment was 50 cents a ton to be paid March 31, 1887, but no guarantee was required. The price of coal free on board New York Harbor was to be raised at once 25 cents a ton.³ This combination, like that of 1885, was made by agreement merely, no attempt being made to have it signed.⁴ It could hardly be said that the combination was successful. It is true that the shipments increased but slightly, and did not exceed the amount agreed upon for the year.⁵ The average price of coal, however, fell to \$2.98 for the twelve months of the agreement, and this was much lower than the general range of prices throughout the preceding years.⁶ This is an indication that the maximum set for the year was too large.

The agreement upon its expiration was not renewed. There were at this time legislative and judicial inquiries into the conduct of the coal trade, and the pools which had prevailed in the past were believed to have been prohibited by the Interstate Commerce Act, which went into effect on January 1, 1887. There was little change, however, in the conduct of operations. A committee appointed by the Pennsylvania Legislature came to the conclusion that the pool may have been technically dissolved in 1887, but it was not in reality, since the former practices continued.⁷ The sales agents of the companies continued to meet and to fix the production and prices. On April 21, 1891, for instance, they met at the Fifth Avenue Hotel, New York, and

¹ See p. 41.

² *R. R. Gaz.*, 18: 268 (1886).

³ *House Report*, 1887-88, no. 4147, p. lii.

⁴ *Chron.*, 42: 462 (1886).

⁵ See Appendix, Table I.

⁶ See Appendix, Table IV; also chart, p. 45.

⁷ *House Report*, 1887-88, no. 4147, pp. liii-liv.

resolved that the amount of coal to be mined in May should be 2,500,000 tons.¹ The action of the sales agents was helpful in securing a greater degree of stability in the coal trade, in spite of the fact that frequently these resolutions were not carried into effect. It was difficult to carry the resolutions into effect because the productive capacity of the mines was twelve to fifteen million tons greater than the market would take at satisfactory prices, — satisfactory, that is, not to the public, but to the companies, which desire prices that will return a profit, not merely on their mining operations, but also a surplus toward meeting the interest charges on the vast obligations incurred (perhaps not always wisely) in securing their enormous holdings of coal lands.

Thus the trade was conducted from 1887 to the close of 1891. Shipments increased from 34.6 million tons in 1887 to 40.4 million tons in 1891.² Prices were rather well maintained from 1887 to 1888, but by 1891 had fallen quite low.³

Some stricter control of the trade than could be secured by the old method of allotment was now felt to be necessary. The initiative was taken by the Philadelphia and Reading Railroad. This company, for several years, had been carrying about 20 per cent of the total shipments, whereas its large coal area entitled it to nearer 30 per cent. This amount it hoped to secure without unduly disturbing the trade. On February 11, 1892, the Reading leased the Lehigh Valley Railroad for 999 years, and guaranteed it 7 per cent dividends after the first of December, 1892.⁴ The Reading also desired to lease the Central Railroad of New Jersey. The laws of the State of New Jersey, however, forbade the lease of a domestic to a foreign corporation.⁵ This prohibition was ingeniously evaded by President McLeod. He secured the incorporation of the Port Reading Railroad to extend from Bound Brook, New Jersey, the terminus of the Reading

¹ *Chron.*, 52: 913 (1891).

² See Appendix, Table I.

³ See Appendix, Table IV; also chart, p. 45.

⁴ Alleged coal combination, 1892-93. 2d Sess., 52d Cong., House of Repres. Report, i, no. 2278, Exh. A, pp. 153 *et seq.* Referred to hereafter as *House Report*, 1892-93, no. 2278.

⁵ *Ibid.*, p. 220.

Railroad, to Arthur Kill in the tide-waters of New York Harbor, thus lying entirely within the State of New Jersey.¹ To this minor corporation the Central Railroad of New Jersey was leased on the 12th of February, 1892, for a term of 999 years.² The Port Reading Railroad, to which the Central of New Jersey was leased, was at this time incomplete, only a few miles of single track having been laid; it was without rolling stock or terminals, and its stocks and bonds were in the hands of a still smaller corporation known as the Port Reading Construction Company, capitalized at \$100,000, which had contracted to build the Port Reading Railroad, and had borrowed the money therefor from the Philadelphia and Reading Railroad. The Port Reading Construction Company was undoubtedly owned for practical purposes by the Philadelphia and Reading Railroad, the incorporators of the Construction Company being either officers or agents of the Railroad.³

The Port Reading Railroad covenanted to pay all the fixed charges of the Central of New Jersey, 7 per cent in dividends, and half of the earnings over 7 per cent and up to 10 per cent. All the earnings in excess of 10 per cent were to go to the Port Reading Railroad. At about the same time, the Central of New Jersey, the Port Reading Railroad, and the Philadelphia and Reading Railroad entered into a tripartite agreement. The Central of New Jersey agreed to lease to the Port Reading, if the Philadelphia and Reading would guarantee the previous contract, and the Port Reading agreed to lease the Central of New Jersey, if the Philadelphia and Reading would insure the increase of traffic contemplated by the new arrangement. The Reading, for its part, was willing to guarantee the lease, because of the valuable coal properties and terminals of the Central of New Jersey.⁴ The Philadelphia and Reading Coal and Iron Company likewise secured control, through a lease and stock arrangement, of the Lehigh Valley Coal Company, the subsidiary mining company of

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 563.

² *House Report*, 1892-93, no. 2278, p. 212.

³ *Ibid.*, pp. 211-212.

⁴ *Ibid.*, pp. 212-213.

the Lehigh Valley Railroad.¹ The Reading Coal and Iron Company contracted, also, to buy, for a certain percentage of the tide-water price, the coal of the Lehigh Valley Coal Company and of the Lehigh and Wilkes-Barre Coal Company, the latter being practically owned by the Central of New Jersey.² An attempt was made, also, to secure a greater interrelation of interests among the carriers of anthracite coal. President Maxwell of the Central of New Jersey, and others connected with him, became large holders of stock in the Lackawanna Railroad.³ Mr. Maxwell and Mr. G. F. Baker, both directors of the Central of New Jersey, were elected to the Lackawanna board, while President Sloan of the Lackawanna was elected to the directorate of the Central of New Jersey. Mr. Sloan announced that the management of the Lackawanna was in sympathy with the plans of the Reading. "Lackawanna will not be a competitive factor in the coal trade."⁴

The Reading Railroad had thus secured control of two competing railroads and their coal companies, and had established, through purchases of stock and interchange of directors, a community of interest with still another railroad. Including the shipments of the Lackawanna, which was working in harmony with the combination, the Reading controlled nearly 70 per cent of the total shipments of anthracite coal.⁵ Additional strength was given to the combination by tying up the individual operators of coal through long term contracts, running generally for seven years, whereby in return for a certain percentage of the tide-water price of coal the operators entering into the contracts placed the marketing of their coal in the hands of the railroads or of their subsidiary coal companies, with whom most of the contracts were made.⁶ Through Mr. McLeod's influence these

¹ *Chron.*, 54: 288 (1892).

² *Annual Report of the Reading Railroad*, 1895, pp. 15-16. See also *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 142.

³ *Chron.* 54, 288 (1892). Mr. Maxwell said that this stock was bought for the purpose of working in harmony with President Sloan for the good of the trade.

⁴ *Ibid.*

⁵ See p. 148.

⁶ See p. 88 for a description of these contracts.

contracts were made not only with the roads embraced in his system, but with a number of the other railroads as well.¹ About the same time, large purchases of the stock of the Boston and Maine Railroad were made, and Mr. McLeod was elected president of the road. Through purchases of stock, or through lease, control was likewise secured of the roads connecting the Reading system with the Boston and Maine. This involved a very great extension of the Reading system, but connected it with an important manufacturing region, and provided it with an outlet for its surplus coal. A new market in New England was chosen in order to increase the Reading's tonnage, as Mr. McLeod said, "without getting into such a row with my neighbors that the whole structure would go to pieces."²

The failure of this combination was due to a number of causes. The price of stove coal was advanced more than a dollar a ton between February and September, 1892,³ and a tremendous public outcry arose. In June, 1892, the Attorney General of New Jersey applied for an injunction to dissolve the lease of the Central of New Jersey to the Reading, on the ground that it was illegal.⁴ In August, Chancellor McGill declared the lease null and void. He held that the intervention of the Port Reading Railroad was but a device to disguise the real nature of the transaction, and that the real lessee was the Philadelphia and Reading Railroad.⁵ This, therefore, amounted in substance to a lease of the Central Railroad of New Jersey to the Reading, which was contrary to law. Suits were brought, also, in the Pennsylvania courts to annul the lease of the Lehigh Valley to the Reading, but these were not successful. It was held that these roads were not parallel and competing lines, and the lease was not, therefore, prohibited by law.⁶ The attempt of the Reading to enter New

¹ *Industrial Commission*, ix, pp. cxxxvii-cxxxviii.

² *Ibid.*, p. 567.

³ See p. 156. Reliable prices for stove coal, which is typical of the prepared or domestic sizes, can be secured only since the year 1890. These figures, therefore, are not comparable with those before 1890. There are not available reliable prices for the same size of coal throughout the whole period.

⁴ *R. R. Gaz.*, 24: 420 (1892).

⁵ *House Report*, 1892-93, no. 2278, p. 219.

⁶ *R. R. Gaz.*, 25: 102 (1892).

England met with the hostility of the influential banking house of J. P. Morgan and Co., which increased the railroad's difficulties. President McLeod's operations in acquiring the Boston and Maine were, furthermore, not only questionable, but extremely expensive.¹ Finally, the agreement to purchase the output of the individual operators involved a severe financial strain as the rise in the price of coal greatly stimulated its production. The Reading, by reaching out for one railroad after another, with its credit already strained to the utmost, invited a catastrophe. The opposition of banking interests and the frequent attacks upon the Reading system hurt its credit. The events leading up to the panic of 1893 made it difficult for the Reading to secure needed funds, and in February, 1893, it failed. The lease of the Lehigh Valley to the Reading was abrogated in August, the New England extension was abandoned,² and the "Reading System" became again primarily a coal-carrying road from the anthracite mines to tide-water.

The control of the trade exercised by the Reading, though resulting in a decline in its shipments, both absolutely and relatively, postponed for a time the effects of the general depression which followed the panic of June, 1893. Though business generally was much depressed during the latter part of 1893, the anthracite trade was fairly prosperous, in spite of the fact that prices were lower than they had been in the latter part of 1892, and the early part of 1893. During the early months of 1894, prices fell steadily. Stove coal, for example, fell in price from \$4.16 in January to \$3.50 in May. In June, despite the fact that nearly twice as much coal was mined as had been recommended by the sales agents, prices improved slightly. The real demoralization of the trade came in September, but in October prices went even lower. The average for the year was \$3.60 or 59 cents less than the average for 1893.³ This demoralized condition of the trade prevailed in spite of an apparent agreement among the companies. At a meeting of the sales agents in December, 1894, a decision was made to restrict the output during January to 45 per cent.

¹ Daggett, *Railroad Reorganization*, p. 124.

² *Ibid.*, p. 128.

³ See p. 156.

of the capacity.¹ In May, 1895, the sales agents substantially agreed to confine mining operations to three consecutive days a week.² These agreements, however, were not well kept. The actual shipments in 1894 exceeded by more than 9 million tons the tonnage recommended by the sales agents.³ This form of restriction was adopted only because of the unwillingness of the companies to yield to the demand of the Reading Railroad for an allotment of 21 per cent.⁴ This company was the real disturbing factor in the situation. Its continued insolvency, relieving it from the necessity of meeting its interest charges, enabled it to carry competition to an extreme.

Thus the year 1895 was an unprofitable one. The Reading Coal and Iron Company, for example, which in 1894 had an excess of receipts over expenses of approximately \$268,000, failed in 1895 to earn its operating expenses.⁵ It is true that a market was found for a greatly increased amount of coal, the shipments in 1895 being 3.5 million tons greater than they had ever been before, and more than 5 million tons in excess of those in the preceding year.⁶ But as a result of the inability of the railroads to agree upon a division of tonnage, the production was carried beyond what the market would take at the prevailing prices, and a decided slump was the natural result. Stove coal, which had sold for \$3.60 in 1894, averaged only \$3.12 in 1895, and in August of that year went down to \$2.89, or 68 cents less than it had been in August of the preceding year.⁷

This state of affairs led to a successful attempt to renew the old allotment plan. Numerous meetings had been held throughout 1895, but an agreement was not reached until January 30, 1896.⁸ The adoption of a new agreement at this time was facilitated by the desire of the Reading to give stability to the coal trade in order that its reorganization plan might be successful. It receded from its demand for 21 per cent of the tonnage, and accepted 20.5 per cent. Definite percentages, since known as "president's percentages," were agreed upon as in the earlier

¹ *Chron.*, 59: 1140 (1894).

² *Ibid.*, 60: 793 (1895).

³ *Mineral Industry*, iii, p. 142.

⁴ *Chron.*, 60: 1076 (1895).

⁵ *Chron.*, 62: 210 (1896).

⁶ See Appendix, Table I.

⁷ See p. 156.

⁸ *Chron.*, 62: 231 (1896).

pools. This agreement, unsigned as a matter of course, was to continue from February 1, 1896, to January 1, 1897, after which it was to be subject to revision on thirty days notice.¹ The fixing of prices and the determination of tonnage was left to the sales agents, but a permanent Board of Managers was to act in an advisory capacity, and to maintain a close watch over all interests.²

The division of tonnage was well adhered to by the companies. In every case the deviation of shipments from the percentage allotted was less than one-half of 1 per cent.³ But the pool, being in its nature secret, could not prevent the recurrence of the old abuses. The tonnage in 1896 was, with the exception of that in 1895, the largest yet attained.⁴ This would seem to indicate that the policy of restriction pursued by the companies was not carried far enough. Nevertheless, prices were much higher than those of the previous year. Stove coal averaged \$3.79 in 1896, which was 66 cents more than the average for 1895.⁵ In spite of the better prices, the agreement upon its expiration was not continued, and the companies returned to the scheme of curtailment of production. This worked well during the first six months of 1897, the mines in the early part of the year being worked only 1½ to 3 days a week.⁶ In the last six months of the year the production was much larger, being, in fact, over 9 million tons greater than the production in the first six months.⁷ Yet the percentage of the total shipments carried by each railroad varied but slightly from the allotment of 1896,⁸ showing that there was a certain amount of harmonious action. Prices rose from \$3.79 in 1896 to \$4.01 in 1897.⁹ In the following year, 1898, the trade was unsatisfactory. The demand was limited, and prices fell to the level of 1896, being especially low during the latter part of 1898.¹⁰ There was less harmony, also, in the conduct of the trade.

Summarizing the period 1873 to 1898, it is apparent that the adoption of the various agreements usually had a steadying

¹ *Chron.*, 62: 231 (1896).

² *Iron Age*, 57: 362 (1896).

³ See pp. 41, 148.

⁴ See Appendix, Table I.

⁵ See p. 156.

⁶ *R. R. Gaz.*, 29: 229 (1897).

⁷ See Appendix, Table III.

⁸ See p. 148.

⁹ See p. 156.

¹⁰ *Ibid.*

effect upon the trade, but they were not long maintained, and upon their termination competition was carried to an extreme, the result generally being an increased production and much lower prices. This fact is well illustrated by the alternating periods of combination and competition in the seventies. Although in 1873, the year of the first combination, the shipments exceeded those of the preceding year, they declined in each of the following years during which there was an agreement, and then upon the dissolution of the combination in the latter part of 1876 increased again. In 1878, when an agreement was again adopted, the shipments declined from 20.8 million tons to 17.6 million, but in the following year, when competition prevailed, they increased to 26.1 million tons, or over 5 million tons greater than the maximum up to that time. The effect upon prices was the same. The average price of all sizes of coal from lump to pea had been \$3.84 in 1872. It rose steadily to \$5.28 in 1875, and was well maintained during the early months of 1876, but on the dissolution of the pool in August fell rapidly, and in 1877, a competitive year, fell as low as \$2.44. In 1878, when the agreement was in force, prices rose again to \$3.15, but upon its abandonment in the following year fell to \$2.34. There had been similar agreements in the eighties, and also attempts to prevent over-production by a diminution of the number of working days, but this latter plan, as has been shown,¹ contained within itself the germs of its own failure. Hence a combination on a larger scale was attempted by the Reading Railroad in 1892, but this likewise proved to be a failure, and resulted in the bankruptcy of its promoter. After a period of low prices in 1894 and 1895, the old allotment plan was tried in 1896. Though this was accompanied by lessened production and higher prices, nevertheless it was not renewed upon its expiration, and competition again prevailed.

The explanation of the persistent attempts during this period (1873-1898) to restrict or eliminate competition is probably twofold: First, the need of meeting the interest charges upon the huge obligations incurred by the companies in attempting to secure control of the coal lands. Second, the intermittent

¹ See p. 47.

character of the trade. Anthracite coal was primarily used for domestic purposes, and even more so during this period than at present. The demand was heavy during the winter months, and the operators were prepared to meet this demand in full. The greatly lessened demand of the summer months offered a strong temptation to cut prices in order to render possible continuous operation at some profit, however small, especially as interest and other fixed charges ran on whether or no the plant was in operation. Storage on a large scale, which would equalize the irregularities, was not regarded as practicable. To prevent price cutting, therefore, pools were formed. These, however, proved only partly successful, and during a considerable portion of this time the coal trade was quite demoralized. The anthracite railroads became convinced that they must find some more effective method for restraining competition than had hitherto been adopted. Conditions, then, were ripe in 1898, as they had been in 1873, for the formation of a combination which promised a more effective control over the trade.

CHAPTER IV

THE DEVELOPMENT OF AN EFFECTIVE COMBINATION SINCE 1898

ABOUT 1898 the anthracite coal trade entered upon a new era. The anthracite coal-carrying railroads began to experience a period of harmony and prosperity unknown in the preceding years. This was the result of a more far-reaching consolidation than had taken place previously. The characteristic features of this new development were:

- I. Railroad consolidation.
 - II. The development of a community of interest among the railroads.
 - III. The practical elimination of the independent operators.
- To a consideration of these attention will next be directed.

I. *Railroad Consolidation*

Early in 1898 the Erie Railroad purchased a controlling interest in the New York, Susquehanna and Western Railroad. The latter road first became engaged in the business of carrying coal in 1882. In that year, tonnage having been pledged to it by independent operators, the Susquehanna Railroad extended its line, then running through New York and New Jersey, westward to Gravel Place, 3 miles northwest of Stroudsburg, where connection was secured with the Lackawanna Railroad.¹ The Susquehanna in the same year, by means of a feeder line from those collieries in the Wyoming field whose tonnage had been pledged to it, secured a connection in the coal fields with the Lackawanna. The Susquehanna had secured its tonnage by giving the independent operators a lower freight rate than had previously prevailed. Its competition was immediately felt, and

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 280; iv, pp. 69, 197.

gradually the other railroads were compelled to reduce their freight charges.¹ In this competition, however, the Susquehanna was at a disadvantage, as it had no through route. It was necessary for it to use the Lackawanna's line from the coal fields to Stroudsburg, a distance of about 65 miles, and after transporting the coal to tide-water to turn it over again to the Lackawanna, as the Susquehanna Railroad had no terminal.² It, therefore, organized in March, 1892, the Wilkes-Barre and Eastern Railroad Company, whose entire capital stock it retained, to extend from Stroudsburg, the western terminus of the Susquehanna Railroad, to Wilkes-Barre in the Northern field.³ In the same year, primarily for the purpose of handling its coal traffic, the Susquehanna secured terminal facilities at Edgewater on New York Harbor, about 5 or 6 miles north of Jersey City.⁴ In 1897 the Susquehanna Connecting Railroad, owned by the Susquehanna Railroad, was constructed near Wilkes-Barre in order to connect the Wilkes-Barre and Eastern with certain mines, whose product had previously been delivered to it by the Lehigh Valley, and by the Delaware and Hudson.⁵ The Susquehanna Railroad in its annual report for 1897 announced that the completion of this line had placed the company in an independent position in respect to the transportation of coal. In the following year the Susquehanna secured connections, also, with other railroads. It was then in a position to carry to market part of the output of the collieries of the Delaware and Hudson and of the Pennsylvania Coal Company, which was at that time being carried by the Erie Railroad.⁶

The Erie, then, in order to remove the danger of this competition, leased the Susquehanna Railroad on February 24, 1898, for the period of one year.⁷ In accordance with the conditions of the lease it increased its capital stock on March 11, 1898, in the

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, pp. 281-282.

² *Ibid.*, iv, p. 163.

³ *Ibid.*, vi, N. Y. S. & W. Exhs., no. 5, p. 18; and iv, p. 165.

⁴ *Ibid.*, iv, pp. 48-49.

⁵ *Ibid.*, vi, N. Y. S. & W. Exhs., no. 5, p. 18; and iv, p. 201.

⁶ *Ibid.*, iv, pp. 200-205.

⁷ *Annual Report of the Erie Railroad*, 1898, p. 16.

amount of \$26,000,000, which was to be exchanged for the stock of the Susquehanna Railroad on the following terms: one share of Erie common was to be exchanged for one share of Susquehanna common, and nine-tenths of one share of Erie preferred for one share of Susquehanna preferred.¹ The Legislature of New Jersey consented to the lease and by the 30th of June, 1898, the Erie had acquired 122,463 shares of the common and 128,440 shares of the preferred stock of the Susquehanna Railroad, or over 96 per cent of its total capital stock.² Though the Susquehanna Railroad is still operated as a separate corporation, its management is the same as that of the Erie Railroad. Both have the same executive officers, and all but three of the twelve directors of the Susquehanna are directors of the Erie.³ The Erie at the same time secured control of the New York, Susquehanna and Western Coal Company,⁴ a majority of whose stock was owned by the Susquehanna Railroad, and the directors and the officers of the New York, Susquehanna and Western Coal Company became the same as those of the Hillside Coal and Iron Company, then the principal subsidiary coal company of the Erie Railroad.

One of the main features in the movement toward railroad consolidation has been the purchase by the Reading Company (the holding company of the Philadelphia and Reading Railway Company and of the Philadelphia and Reading Coal and Iron Company)⁵ of a controlling interest in the Central Railroad of New Jersey. The old Philadelphia and Reading Railroad had previously on two occasions secured a lease of the Central of New Jersey, once in 1883 and again in 1892. It had been forced, however, to give up the lease in both cases, the first time on account of bankruptcy, and the second because the lease was declared null by the New Jersey courts. Having been thwarted in its attempt to secure control of the Jersey Central by lease, the Reading Company (which owned all the stock of the Philadelphia and

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exhs. 153 and 154.

² *Annual Report of the Erie Railroad*, 1898, p. 16.

³ *Poor's Manual of Railroads*, 1914, pp. 221, 235.

⁴ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 99.

⁵ See p. 115.

Reading Railway Company, the successor to the Philadelphia and Reading Railroad Company) decided to purchase outright a controlling interest in the road. In pursuance of this plan, the Reading Company, on January 5, 1901, purchased at \$160 a share, 145,000 shares of the Central of New Jersey, or over 53 per cent of the total stock outstanding. The money for the purchase was secured by the issue of 60,353 shares of first preferred stock, and 34,275 shares of second preferred, and in addition by \$23,000,000 of 4 per cent collateral trust bonds, secured by the deposit of the 145,000 shares of the Central Railroad of New Jersey, as well as by 29,900 shares of the capital stock of the Perkiomen Railroad, and 4400 shares of the capital stock of the Port Reading Railroad Company.¹

Though the price paid for the stock of the Central of New Jersey was very high as compared with market quotations during 1900, the advantages of the purchase were quite obvious. The combination of the two railroads placed nearly one-third of the total shipments of coal, on the basis of the shipments for 1900, under the control of the Reading Company. The advantages for the future from the standpoint of coal tonnage were even more important than the advantages immediately secured. The Jersey Central owned the second largest reserve supply of coal.² By the acquisition of this reserve the Reading system owned and controlled about 63 per cent of all the unmined coal in the State of Pennsylvania.³ From the standpoint of facilities, also, the advantages of the consolidation were great. The Central of New Jersey was in many ways a natural complement to the Reading lines. Though the Reading possessed an outlet to tide-water by the Port Reading Railroad, it had been found more convenient to use the Central of New Jersey from Bound Brook to Jersey City for passenger and general freight traffic. By this purchase the Reading secured permanent control over this route. The Reading thus had a direct line from the Schuylkill field to tide-water, and was relieved of the necessity of first going to Philadelphia,

¹ *Annual Report of the Reading Company, 1901, p. 13.*

² See p. 108.

³ *Annual Report of the Reading Company, 1901, p. 13.*

in order to reach New York. The direct line to New York could profitably be used as a special outlet for the Reading's anthracite traffic, and the main line of the Reading to Philadelphia could be devoted to the development of its general traffic, which was becoming of more and more importance in the business of the company.¹ The Central of New Jersey owned, in addition, large areas of land in New York City which were capable of providing terminal facilities for the company for many years to come.²

The president of the Reading Company, in his testimony before the examiner in the suit to dissolve the anthracite coal combination, recently decided by the Supreme Court of the United States,³ gave the following account of the purchase of the Central Railroad of New Jersey by the Reading Company:

The Reading must get to New York over the Jersey Central system. . . . In December, 1900, I happened to be in New York and I was told that the gentlemen who controlled the New Jersey Central were tired of it and that the stock was for sale. I was also told that the Baltimore and Ohio Railroad had made an offer for this stock, which the parties had refused because they considered it too small. This information was a great surprise and I at once went to Mr. Morgan, who was a voting trustee of the Reading Company and told him that the situation was most alarming; that it would be the ruin of the Reading property if an antagonistic company got control of the Jersey Central, or if the Baltimore and Ohio got us by the throat in that way and could control our terminals in New York, and that therefore the matter called for prompt action. I told him then that I always thought that the Jersey Central could be legally bought; that the limitations in the laws of New Jersey applied only to leasing and that, under the powers of the Reading Company and under the statutes of New Jersey, we could undoubtedly buy a majority of the stock. He told me to keep my own counsel and look up the whole subject and see what could be done. I came home and I made a critical and careful examination of the reports of the New Jersey Central Railroad for a number of years, to see what in my judgment its stock would be worth, taking into account the future possibilities. I also took up the question of how we could buy it and finance it. I made a report to Mr. Morgan in about a week's time. It took me a good while to get all the information I got, because I had to do it secretly, you know, as counsel. I sent it to Mr. Morgan. . . . When I got home, one night in Reading there was a call at the telephone and I went to the phone and Mr. Morgan was there, telling me to come to New York immediately, that I must come on at once about that Jersey Central business. I went to New York the next morning.

¹ *Industrial Commission*, xix, p. 46.

² *Transcript of Record in Sherman Anti-Trust Case*, v, p. 1185.

³ See p. 215.

I saw Mr. Morgan. . . . He said to me, "What do you think is the fair price?" I said, "I have named what I think is the fair price in there." He called for Mr. Baker, who was the chairman of their committee, or a leading man in it. Mr. Baker came over and we sat down and dickered for about five minutes, until Mr. Baker said they would take one hundred and sixty and I said I thought I would advise that, and I went to the phone and called up Mr. Welsh and Mr. Harris, who were, with myself, a majority of the executive committee and they said, "Yes," and the deal was closed. That is the whole story. We did not even make a writing about it. Mr. Baker said he would undertake himself and with Mr. Maxwell and friends to deliver us a majority of the stock.¹

President Baer justified the purchase on the ground that it was necessary to prevent the Central of New Jersey from falling into hostile hands. His contention, however, seems hardly supported by the evidence. There was no testimony by any officer or stockholder of the Baltimore and Ohio or of the Central of New Jersey to the effect that the Baltimore and Ohio was a prospective purchaser. The only evidence upon this point was Mr. Baer's testimony, and he merely said that he had been informed, without naming his informant. The Reading, also, had a perpetual agreement with the Jersey Central for the exchange of traffic facilities, which could not have been broken by the Baltimore and Ohio, even had it intended to purchase the Jersey Central.² Furthermore, as the Baltimore and Ohio went only to Philadelphia, and, in order to secure a connection with the Central of New Jersey at Bound Brook, two-thirds of the distance from Philadelphia to New York, it would have been necessary to use the tracks of the Reading Railroad, the Baltimore and Ohio would hardly have desired to break off its harmonious relations with its connections.

A contributing factor in the movement toward consolidation was the purchase of the New York, Ontario and Western by the New York, New Haven and Hartford. The Ontario had built an extension into the Northern coal field in 1890, and by its competition for tonnage had compelled a reduction in the freight rates.³ On November 1, 1904, the New Haven purchased from

¹ *Transcript of Record in Sherman Anti-Trust Case*, v, pp. 1185-1187.

² *Ibid.*, iv, pp. 528-530.

³ See p. 88.

Kuhn, Loeb and Company, 291,600 shares of the common and 22 shares of the preferred stock of the Ontario, constituting a bare majority of each class of stock. The price paid was \$13,983,197, but dividends to the amount of \$874,800 were due shortly, thus making the net cost approximately \$45 a share. The purchase was financed temporarily by the New Haven through the issue of promissory notes maturing July 1, 1905, which were to be paid out of the proceeds of an issue of \$15,000,000 of fifty-year 4 per cent debentures of the Company dated July 1st, 1905, the balance of the proceeds of the issue being devoted to the general purposes of the company.¹ The New Haven not being an anthracite coal road, the controlling motive for the purchase was not a desire to unify the management of the coal trade. The purchase was inspired by a desire to control, as far as possible, the coal supply of the large district in western and southern New England served by its line, and also to place the New Haven in a stronger position with respect to the apportionment of the freight rate on through business to and from the West.² But though the New Haven was not an anthracite coal road, its policy, nevertheless, was largely influenced by financial interests represented in the anthracite coal roads, prominent representatives of these interests being Mr. J. P. Morgan, Mr. William Rockefeller, Mr. H. McK. Twombly, and Mr. A. J. Cassatt.³ Though often acting in harmony with the other railroads, the Ontario had been considered as something of a free lance.⁴ Under its new management it has exhibited less independence. The Vanderbilt interests, which are very influential in the management of the anthracite coal trade, recently attempted to acquire the Ontario from the New Haven,⁵ but the New York State Public Service Commission refused to permit the transfer.⁶

In the same year (1904) the Lehigh Coal and Navigation Company purchased a controlling interest in the Lehigh and New

¹ *Annual Report of New York, New Haven & Hartford Railroad*, 1905, p. 10.

² *Chron.*, 79: 2086 (1904); and *Mineral Industry*, xiii, p. 89.

³ See Poor's *Manual of Railroads*, 1905.

⁴ *Mineral Industry*, xiii, p. 89.

⁵ *Chron.*, 93: 1600 (1911).

⁶ *Chron.*, 94: 983 (1912).

England Railroad Company, which extended from Slatington, Pennsylvania, and Bethlehem, Pennsylvania, two points on the Lehigh river, to Campbell Hall, New York, where it connected with the New York Central lines, and with the Poughkeepsie Bridge system of the New Haven.¹ Because of the difficulty experienced in procuring suitable traffic arrangements with its railroad connections on the Lehigh river, the Lehigh and New England Railroad in 1912 extended its line 32 miles northwestward to Tamaqua, where a connection was effected with the Panther Creek Railroad, a gathering line serving the various mines belonging to the Lehigh Coal and Navigation Company.² The Coal and Navigation Company thus secured for the coal from its mines in the Lehigh and Schuylkill regions a direct all-rail outlet to New York and New England points. Since 1904, also, the Lehigh Coal and Navigation Company has acquired all of the stock of the Lehigh and New England Railroad,³ and the two corporations now have the same president, vice-president, and secretary, and a majority of directors in common.⁴ In fact, the Lehigh and New England Railroad is operated under the direct control of the Lehigh Coal and Navigation Company.⁵

In the year 1904, also, the Lehigh Coal and Navigation Company further increased its stockholdings in the Lehigh and Hudson River Railway Company, and shortly thereafter the president of the Lackawanna Railroad, of the Lehigh Valley Railroad, and of the Erie Railroad entered the directorate of the Lehigh and Hudson River Railway Company.⁶ This company had been incorporated in 1882. In 1885 a majority of its stock had been jointly purchased by the Lehigh Coal and Navigation Company and the Central Railroad of New Jersey, both of which advanced

¹ *Annual Report of the Lehigh Coal and Navigation Company*, 1905, pp. 11-12.

² *Answer of the Lehigh Coal and Navigation Company*, pp. 9-11. See Biblio. no. 174.

³ *Ibid.*

⁴ Poor's *Manual of Railroads*, and Moody's *Manual of Corporation Securities*, 1913.

⁵ Original Petition in *U. S. v. Reading Company*, pp. 58-59. See Biblio. no. 173.

⁶ *Annual Report of the Lehigh Coal and Navigation Company*, 1905, p. 11; also Poor's *Manual of Railroads*.

it large sums of money for its extension and improvement.¹ The Lehigh and Hudson River Railway Company, when completed, extended from Phillipsburg, New Jersey (where it connected with the Central Railroad of New Jersey) to Maybrook, New York, where a connection was secured with the Central New England Railroad (the Poughkeepsie Bridge system). It thus constituted another outlet for anthracite coal to New York and New England points.² At the present time the Lehigh Coal and Navigation Company and the Central Railroad of New Jersey not only own a majority of the stock of the Lehigh and Hudson River Railway Company, but they jointly guarantee \$1,062,000 of its \$3,229,000 funded debt.³ The president, vice-president, and two directors of the Central of New Jersey, and the vice-president of the Lehigh Coal and Navigation Company are directors of the Lehigh and Hudson River Railway Company, and a director of the Lehigh Coal and Navigation is the president of the Lehigh and Hudson River Railway Company, as well as one of its directors.⁴

II. *The Development of a Community of Interest among the Railroads*

The movement toward consolidation in the anthracite coal industry through the purchase of competing or independent railroads has been strengthened by means of the establishment of a greater degree of common interest among the railroads. This has been brought about (1) by the inter-ownership of stock, (2) by interlocking directorates. The early attempts to agree upon a division of the tonnage had failed, it will be recalled, because some railroads continually exceeded the percentages allotted to them. A community of interest was now developed,

¹ *Answer of the Lehigh and Hudson River Railway Company*, p. 3. See Biblio. no. 174.

² Original Petition in *U. S. v. Reading Company*, p. 16. See Biblio. no. 173. The Lehigh and Hudson River Railway Company for a part of its route has trackage rights over the Pennsylvania Railroad.

³ *Answer of the Lehigh and Hudson River Railway Company*, p. 3. See Biblio. no. 174.

⁴ Poor's *Manual of Railroads*, and Moody's *Manual of Corporation Securities*, 1913.

which led each railroad to adhere more closely to its "proper" proportion of the tonnage. In the new movement the Pennsylvania Railroad, which had steadfastly refused to enter the earlier combinations, took a prominent part, even going so far as to secure indirectly a large interest in the main coal-carrying roads.

(1) An important step in bringing about greater unity of action in the management of the coal trade through the interchange of stock ownership was the joint purchase by several of the coal roads of a large block of the stock of the Lehigh Valley Railroad. Early in 1901 the Lake Shore and Michigan Southern, owning over 21.6 per cent of the stock of the Reading Company and in turn controlled by the New York Central, agreed with the Reading Company, the Central of New Jersey, the Lackawanna, and the Erie to purchase \$5,700,000, \$1,000,000, \$1,600,000, \$1,850,000, and \$1,850,000 respectively — in all \$12,000,000 — of the stock of the Lehigh Valley,¹ or nearly 30 per cent of the total stock. The stock was not all purchased at the same time, but it is clear from President Baer's testimony that the railroads jointly agreed to purchase the stock, for in his testimony he said that the Lehigh Valley was in bad shape, and it was thought very dangerous to let it go into a receiver's hands, because of the effect it would have on the other railroads and on general business.

After talking that over with a number of gentlemen, Mr. Morgan being anxious that it should be done, I came over to Philadelphia, and saw Mr. Stotesbury, and suggested that he see the trustees of the Packer estate and of the college — the Lehigh University had an interest in it. We agreed to buy the stock. Then we divided it up between the four systems. I insisted that the Lake Shore and the Vanderbilt System, which was the strong system, should take a big block of the stock, and the rest of us should not be loaded down, because I did not know whether we could save the Lehigh Valley.²

After the purchases had been consummated Mr. Thomas, who had been president of the Erie Railroad, was elected president and a director of the Lehigh Valley; Mr. Baer, president of the Reading System and of the Central of New Jersey, became a member of the Executive Committee and of the Board of Direc-

¹ *Brief for the United States in Sherman Anti-Trust Case*, p. 117. See Biblio. no. 156.

² *Transcript of Record in Sherman Anti-Trust Case*, v, p. 1217.

tors, and Mr. J. R. Maxwell, Mr. G. F. Baker and Mr. H. McK. Twombly, all officers or directors of some of the other companies, became directors of the Lehigh Valley.¹ The anthracite coal railroads thus virtually secured control of the Lehigh Valley, and brought it into assured harmony with the controlling interests in the anthracite coal trade. The stock of the Lehigh Valley continued to be held by these railroads until the middle of June, 1907. Since that date the Erie Railroad has disposed of its holdings, and the Lake Shore has sold a large block of its shares. As late as the 1st of October, 1908, however, \$7,650,000, or nearly 20 per cent of the capital stock of the Lehigh Valley, was owned by the Reading Company, the Central of New Jersey, the Lackawanna, and the Lake Shore, all but the latter and the Erie having retained their original holdings.² Although these roads may have recently disposed of their holdings, the Lehigh Valley is still operated in harmony with the other railroads.

By 1901 a degree of common interest sufficient to assure an effective control of the anthracite coal situation seems to have been established. Mr. Harris, formerly president of the Reading, testified in 1901 that the anthracite coal-carrying railroads were working in substantial though not in exact harmony.³ Mr. Woodlock, railroad editor of the Wall Street Journal, testified that the existence of the community of interest was thoroughly well understood. He said, "Mr. Morgan represents a group of interests that are undoubtedly dominant in the Reading, Lehigh Valley, Jersey Central, Lackawanna, Erie with all its appendages, and it is believed that they are taking steps more or less to control the Delaware and Hudson."⁴ The railroads that were reckoned the most independent at this time were the New York, Ontario and Western, the Delaware, Susquehanna and Schuylkill, and the Pennsylvania. The Ontario was purchased by the New York, New Haven and Hartford Railroad, and the Delaware, Susquehanna and Schuylkill by the Lehigh Valley, in 1904 and 1905, respectively. The Pennsylvania Railroad, which had so long

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 184.

² *Ibid.*, iii, Exh. 52.

³ *Industrial Commission*, ix, p. 598.

⁴ *Ibid.*, ix, p. 455.

held aloof from the anthracite combinations, has, since 1901, taken an important part in the control of the anthracite coal trade. The New York Central and the Pennsylvania presumably entered into an agreement whereby the former was to increase its interest in the anthracite traffic and the latter in the bituminous traffic. Certain it is that during the years 1900 to 1902 the Pennsylvania secured large blocks of stock in the Baltimore and Ohio, in the Chesapeake and Ohio, and in the Norfolk and Western, all important bituminous coal-carrying roads.¹ Through the Baltimore and Ohio, approximately 40 per cent of whose stock was owned by it, the Pennsylvania bought in the summer of 1902 over 43 per cent of the stock of the Reading Company. Half of the stock so acquired was sold to the Vanderbilt interests, which turned it over to the Lake Shore and Michigan Southern Railway, which was practically owned by the New York Central Railroad.²

The situation about 1902 may be briefly indicated: The New York Central (controlled by the Vanderbilt interests, which had large holdings in the Lackawanna), and the Pennsylvania, jointly controlled the Reading Company, which owned the Reading Railway and the Central Railroad of New Jersey. The output of the Delaware and Hudson, a road usually credited with Vanderbilt affiliation, was largely handled by the Erie Railroad, controlled by Mr. Morgan, who was working in harmony with the other interests to make the anthracite coal trade profitable. The Reading, the Central of New Jersey, the Lackawanna, the Erie, and the New York Central (through the Lake Shore) exercised a considerable influence on the policies of the Lehigh Valley. The result of this close inter-relationship of interests was to secure an unusual degree of harmony in the anthracite coal trade. Since 1902 the inter-ownership of stock has become somewhat less. The Pennsylvania in the latter part of 1906 disposed of a large amount of its holdings in the soft coal roads, including about half of its stock in the Baltimore and Ohio.³ It thereby diminished its influence over the policies of the Reading Com-

¹ See *Annual Reports of the Pennsylvania Railroad*, 1900-1902.

² *Chron.*, 76: 102-103 (1903).

³ *Ibid.*, 83: 562 (1906).

pany. The Lake Shore also sold a part of its Reading stock. Mention has been made of the sale of Lehigh Valley stock by the Erie and the Lake Shore. In spite of these sales the interrelation of stock ownership seems still sufficient to make for harmonious action in the management of the trade.

(2) Closely connected with the community of interest among the railroads through the interweaving of stock ownership was an increasing representation of the railroads upon the directorates of other systems. Some examples¹ of changes in this respect may be noted. During the years 1898 to 1900 none of the directors of the Reading Company were on the board of the Central of New Jersey, but from 1901 to 1903 four of the Reading Company directors were so represented. Two of the directors of the Reading Company in 1898 and one from 1899 to 1900 were directors of the Lehigh Valley, but in 1903 there were three of the directors of the Reading Company on the directorate of the Lehigh Valley. From 1898 to 1900 none of the directors of the Central of New Jersey were on the Lehigh Valley board, but from 1901 to 1902 two directors and in 1903 three directors were represented in the councils of the Lehigh Valley Railroad. The changes during these years naturally brought about a greater unity of action in the policies of these railroads.

The other anthracite coal roads have shown the same tendency, but to a lesser extent. In 1903, three of the directors of the Central of New Jersey were directors of the Lackawanna, but they had been on the board of the Lackawanna since 1898. Three of the directors of the Reading Company were on the Erie board in 1898, and though there were only two from 1899 to 1902, in 1903 there were again three Reading Company directors on the board of the Erie. The only common representation on the various directorates from 1898 to 1900 in addition to those already mentioned was a common director for the Lehigh Valley and the Erie and one for the Delaware and Hudson and the Ontario, the latter being, also, a director of the New York Central, representing the so-called Vanderbilt financial interests. By 1903 the common representation had increased somewhat. In

¹ See Poor's *Manual of Railroads*.

that year three of the Lehigh Valley directors were also directors on the Lackawanna board, three of the Central of New Jersey directors were directors of the Erie, four of the directors of the Lehigh Valley were directors of the Erie, one of the directors of the Delaware and Hudson was a director of the Erie, and another was a director of the Ontario, and there was, in addition, a much greater degree of interlocking directorates with other railroads, involving especially an interchanging of directors with the New York Central, the Lake Shore, and the Baltimore and Ohio, all of which had taken such an important part in the management of the coal business.

The situation in 1898, a competitive year, may be well compared with the situation in 1903, when the combination was well under way, by an examination of the following table showing the directors common in these years to two or more roads:—

	1898							
	P. & R.	C. R. R.	L. V.	Lacka.	D. & H.	Erie	Penn.	Ont.
A	+	..	+					
B	+	..	+	+		
C	+	+		
D	+	+		
E	+	..	+				
F	+	..	+				
G	+	..	+				
H	+	+

	1903							
	P. & R.	C. R. R.	L. V.	Lacka.	D. & H.	Erie	Penn.	Ont.
A	+	+	+					
B	+	+	+		
C	+	..	+	+	..	+		
D	+	+	+	+		
E	+	+	+		
F	+	+	+				
G	+	..	+				
H	+	+	+				
I	+	+		
J	+	+		
K	+	+

The situation in 1903 may be summarized as follows:¹ Four out of the nine directors of the Reading Company constituted

¹ For the interlocking directorates in 1913, see p. 154.

four of the nine directors of the Central of New Jersey. Six out of the thirteen directors of the Lehigh Valley were directors either of the Reading Company or of the Central of New Jersey. Four out of the fourteen directors of the Lackawanna were directors of the Reading Company or of the Central of New Jersey, three of whom were directors of the Lehigh Valley also. Three of the directors of the Erie were directors of the Reading Company, three were directors of the Central of New Jersey, three of the Lehigh Valley, and one was a director of the Delaware and Hudson. One of the directors of the Delaware and Hudson was, therefore, a director of the Erie, and another was a director of the Ontario, and also of the New York Central, and of the Lake Shore. After the New York Central and the Pennsylvania obtained practical control of the Reading, and large interests in other roads, the ramifications became still greater. Three of the New York Central directors, and three of the Lake Shore directors were then directors of the Lackawanna, one of the directors of the New York Central was a director of the Reading Company and of the Lehigh Valley, and another was a director of the Delaware and Hudson and of the Ontario. The Pennsylvania, through the Baltimore and Ohio, was represented by one director in the Reading Company and in the Central of New Jersey, and by two in the Lehigh Valley and two in the Erie. In addition, Mr. Morgan, a director of the New York Central and of the Lake Shore, had very large holdings in the anthracite coal roads. The development of a community of interest can hardly be questioned. Its influence upon the concentration of the control of the trade and the consequent restraint of the factors that tended toward competition is too obvious to require comment.

III. *The Practical Elimination of the Independent Operators*

The final phase of the recent consolidation policy has been the practical elimination of the independent operators as factors of any importance in the control of the anthracite coal trade. This elimination has been effected in two ways: first, by purchase; second, by means of the percentage contracts.

(1) Purchase. In connection with the Reading combination of 1892 mention was made of certain contracts between the individual operators¹ and the coal companies of the railroads, which gave to the coal companies control of the output of the individual operators during the life of the contracts. These contracts, adopted in 1892, though varying somewhat in their terms, provided in the main that during the life of the contract the individual operator was to deliver his entire output to the coal company, and in return was to receive for the prepared or domestic sizes 60 per cent of the average price at tide-water. This was equivalent to charging the individual operator a freight rate of 40 per cent, the railroad coal company, however, bearing the selling costs. Most of these contracts ran for seven years, and therefore expired in 1899.²

For some years prior to the expiration of these contracts, the operators had contended that they were entitled to a higher percentage of the tide-water price, or what amounted to the same thing, that they were paying too high a freight rate.³ For the purpose of securing better rates from the railroads, they kept up an organization called the Anthracite Coal Operators Association, with about 60 members.⁴ In 1898 there was general dissatisfaction with the amount received under the contracts. The operators attempted to effect a renewal of the contracts on more favorable terms, but the coal companies refused to make any concessions. The individual operators of the Wyoming region determined, then, to build an independent road to tide-water. Accordingly they organized in Pennsylvania in May, 1898, "The New York, Wyoming and Western Railroad Company," with a capital stock of \$1,000,000.⁵ This new line was to extend from Pittston in Luzerne County in the Northern field to Belvidere on

¹ The term individual operator has frequently been used to designate the operator selling his coal to a railroad or a railroad coal company under contract, as distinguished from the independent operator who has no such contract, but sells his coal independently.

² *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 413.

³ *Ibid.*, ii, p. 358.

⁴ *Ibid.*, ii, p. 212.

⁵ *Ibid.*, vi, Temple Iron Company Exhs., no. 10, p. 46.

the Delaware river.¹ At this point the road was to connect with a number of lines extending across the State of New Jersey to tide-water. Through the Wyoming Sales Company, the New York, Wyoming and Western was to pay the operators 65 per cent of the tide-water price for the prepared sizes, the contracts to extend for the most part throughout the life of the colliery.² Mr. E. B. Sturges, a large coal operator, who had previously successfully promoted the entrance of the New York, Ontario and Western, and the New York, Susquehanna and Western into the coal fields, was elected president of the new railroad.³ A large majority of the individual operators of the Lackawanna region supported the proposed new line through pledges of tonnage, or through subscription to its stock.⁴ Mr. Sturges testified before the Interstate Commerce Commission that most of the tonnage not then under contract was pledged to the proposed new railroad. Its tonnage could not be estimated exactly, but it was calculated that it would be from two to five million tons.⁵ Among the most influential supporters of the road was the firm of Simpson and Watkins, mining in 1898 over 1,300,000 tons.⁶ This firm, both of whose members were directors and large shareholders of the proposed railroad,⁷ pledged to the Wyoming and Western about half a million tons, the bulk of their output not at that time under contract.⁸

The new line was unquestionably started in good faith, in the hope of enabling the individual operators to secure a better price and a better market for their coal. Surveys of the route were made, the right of way secured, and 7000 tons of steel rails purchased.⁹ The construction of this road, however, would have

Transcript of Record in Sherman Anti-Trust Case, ii, p. 285.

² *Ibid.*, ii, pp. 477, 480.

³ *Ibid.*, vi, Temple Iron Company Exhs., no. 10, p. 46.

⁴ Files of Interstate Commerce Commission in case of *W. R. Hearst v. Philadelphia and Reading Railway Company*, p. 394. Referred to hereafter as *Files of Interstate Commerce Commission in Hearst Case*.

⁵ *Ibid.*, p. 645.

⁶ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 326.

⁷ *Ibid.*, vi, Temple Iron Company Exhs., no. 10, p. 46.

⁸ *Files of Interstate Commerce Commission in Hearst Case*, p. 645.

⁹ *Ibid.*, pp. 647-648.

resulted in a considerable loss of tonnage to a number of the railroads then serving the Northern field, and the proposed increase in the percentage, which involved a lower freight rate, would have had an unsettling effect upon railway tariffs. Several of the railroads, representing over two-thirds of the total shipments, determined to defeat this project for an independent railroad. In carrying out their purpose use was made of the Temple Iron Company. As this company has had much to do with the later regulation of the trade, some account of its organization is here given.

The Temple Iron Company was organized on March 22, 1873,¹ under the provisions of an act of the Assembly of the State of Pennsylvania, entitled, "An Act to provide for the incorporation of iron and steel manufacturing companies," approved March 21, 1873.² This act, as amended by the act of April 29 of the following year, authorized all companies organized under its provisions "to purchase, lease, hold, mortgage and sell real estate and mineral rights, to prove and open mines, to mine and prepare . . . coal, iron ore and other minerals . . . and to manufacture iron and steel, or any other metal . . . and to transport all of said articles or any of them to market, and to dispose of the same, and do all such other acts and things as a successful and convenient prosecution of said business may require."³ Clause six of Section 38 made it lawful for any incorporated company of Pennsylvania or elsewhere to purchase the bonds and stocks of any companies incorporated under the above laws, and also to guarantee the payment of their bonds and interest thereon.

The benefits of the very broad powers granted by the amended act of 1874, and subsequent legislation, could be obtained, however, only by the acceptance of the Constitution of 1874.⁴ The privilege of mining, transporting and selling coal had not been conferred upon the Temple Iron Company by the original act of March 21, 1873,⁵ but inasmuch as it was engaged merely in the iron business, it did not consider the privileges of the later act

¹ *Files of Interstate Commerce Commission in Hearst Case*, p. 811.

² *Laws of Penn.*, 1873, no. 4.

⁴ *Ibid.*

³ *Ibid.*, 1874, no. 32, §38.

⁵ *Ibid.*, 1873, no. 4.

sufficient to induce it to subject itself to the Constitution of 1874. As late as 1899, the Temple Iron Company, capitalized at \$240,000, was engaged on a small scale in the manufacture of pig iron, with only a single-stack anthracite furnace, and with a labor force of from 100 to 200 men.¹

It occurred to President Baer that this small company, with its broad charter, was an excellent instrument with which to prevent the construction of the proposed independent railroad. He was anxious, he said, "to get Simpson and Watkins tied up with us with their coal interests and not be Ishmaelites in the field."² It was when he had under consideration the best way of holding the collieries, providing the railroads should purchase them, that it first occurred to him to use the Temple Iron Company.³ Mr. Baer was quite familiar with the affairs of the Temple Iron Company, as he had aided in drawing up the act for its incorporation. He had also been its president for some ten years prior to 1899, and in that year was one of its largest stockholders.⁴ The balance of the stock, as it happened, was held by personal friends of Mr. Baer, and they proved willing to sell their shares to him.⁵ The valuable charter of the Temple Iron Company was thus secured for the combination. On January 26, 1899, the capital stock of the Temple Iron Company was increased to \$2,500,000,⁶ and about the same time \$3,500,000 of bonds were issued. The Company accepted the provisions of the Constitution of 1874,⁷ and received new letters patent entitling it to the privileges conferred by the act of April 29, 1874, and its supplements, and thus secured the same broad privileges with respect to coal which it already possessed with respect to iron.⁸

¹ *Files of Interstate Commerce Commission in Hearst Case*, pp. 574-575.

² *Ibid.*, p. 581.

³ *Ibid.*, p. 577.

⁴ *Ibid.*, pp. 574, 576, 811.

⁵ *Transcript of Record in Sherman Anti-Trust Case*, v, p. 1191.

⁶ *Ibid.*, ii, p. 327.

⁷ *Ibid.*, i, p. 125.

⁸ The charter of the Temple Iron Company "gave it power to engage in almost any sort of business, and to increase its capital substantially at will." 226 U. S.

Negotiations were now opened, through the firm of J. P. Morgan and Company, for the purchase of the collieries of Simpson and Watkins. Mr. Simpson offered to sell for \$5,000,000, and although he refused to allow a technical examination of the properties, his terms were accepted.¹ The provisions of the sale were complicated, and involved a number of transactions. On February 27, 1899, Simpson and Watkins and the Temple Iron Company entered into an agreement whereby Simpson and Watkins agreed to sell their seven coal companies and three miscellaneous companies to the Temple Iron Company, and, in addition, to provide a working capital of \$498,396.66. In return they were to receive \$2,260,000 of the stock and \$3,500,000 of the bonds of the Temple Iron Company.² On the same date Simpson and Watkins agreed with the Guaranty Trust Company of New York that simultaneously with the receipt from the Temple Iron Company of its capital stock and bonds they would transfer to the Guaranty Trust Company the \$2,260,000 stock so assigned and \$2,100,000 of the bonds. In consideration of this transfer the Trust Company agreed to pay Simpson and Watkins \$3,238,396.66 in cash and \$1,000,000 in certificates of beneficial interest in the stock of the Temple Iron Company. At the same time the Trust Company agreed to purchase from Mr. G. F. Baer all of the other outstanding stock of the Temple Iron Company (\$240,000), and in accordance with a previous agreement with Mr. Baer to pay therefor \$151,603.34, representing 60 cents on the dollar.³ Simpson and Watkins were thus to receive from the Trust Company \$4,238,396.66 in cash and certificates. In addition, the \$1,400,000 of bonds of the Temple Iron Company retained by Simpson and Watkins were worth \$1,260,000 judging by the discount at which the other bonds were later sold to a syndicate, making a total of \$5,498,396.66. As it was part of the agreement that Simpson and Watkins were to supply the Temple Iron Company with \$498,396.66 working capital, the net price received was \$5,000,000, which was the price agreed upon.

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 442.

² *Ibid.*, i, pp. 134-136. Simpson and Watkins Agreement.

³ *Ibid.*, iii, Exh. 165.

The Temple Iron Company was thus in possession of the collieries of Simpson and Watkins. All of its stock, however, was held by the Guaranty Trust Company. To protect the Trust Company, the credit of the Temple Iron Company was taken care of by those railroads which were to secure control of the Iron Company. On the same day and as part of the same transaction, the Reading Company entered into a tripartite agreement with the Guaranty Trust Company and the Temple Iron Company, whereby it agreed to purchase from the Trust Company at par 29.96 per cent of the capital stock of the Temple Iron Company, and to guarantee the same percentage of its funded debt, principal and interest.¹ At the same time the Central of New Jersey, the Lehigh Valley, the Lackawanna, the Erie, and the New York, Susquehanna and Western contracted, in identically the same terms except as to the percentages, to purchase 17.12 per cent, 22.88 per cent, 19.52 per cent, 5.84 per cent, and 4.68 per cent, respectively, making 100 per cent in all, of the capital stock of the Temple Iron Company, and to guarantee the same percentages of its funded debt. These percentages were determined by the proportion of the anthracite tonnage handled by each railroad, Mr. Baer, who suggested the plan of guarantee, testifying that it was his recollection that they were based on the figures of the preceding year.² This agreement to purchase became effective on January 1, 1904, and then only upon the written request of the Trustee, but it became compulsory on the 31st of December, 1906.³ The Guaranty Trust Company was still further protected by an agreement between the Company and a Syndicate composed of J. P. Morgan and Company, Drexel and Company, Mr. H. McK. Twombly, Mr. W. Rockefeller, Mr. G. F. Baker, and Mr. James Stillman, whereby the Syndicate agreed to purchase from the Trust Company \$2,100,000 of the bonds at 90 cents on the dollar, and \$1,500,000 in certificates of the capital stock of the Temple Iron Company, which the Guaranty Trust Company had been authorized to issue.⁴

¹ *Transcript of Record in Sherman Anti-Trust Case*, i, p. 143.

² *Ibid.*, v, p. 1193.

³ *Ibid.*, i, p. 137. Railway Agreement.

⁴ *Ibid.*, iii, Exh. 166. Syndicate Agreement.

It was a part of the agreement that the stock of the Temple Iron Company was to be held by the Guaranty Trust Company under a voting trust. Voting trust certificates in the stock were issued by it and these were widely distributed, but the Trust Company retained the stock and the right to vote it. Though Mr. Watkins was for a year or two president of the Temple Iron Company, the Trust Company gave a proxy to Mr. Baer to vote the stock.¹ The practical control of the Iron Company thus rested with Mr. Baer. He and the presidents of the roads entering into the guarantee were elected directors of the Temple Iron Company, as were also a few personal friends of Mr. Baer.² On December 31, 1906, the certificates were called in by the Trust Company, and, in accordance with the provisions of the tripartite agreement, practically the entire capital stock of the Temple Iron Company was purchased by the railroads,³ and they have continued to hold it to the present time⁴ — though the Reading Company transferred a part of its shares to its subsidiary company, the Philadelphia and Reading Coal and Iron Company. The Temple Iron Company was, therefore, brought directly under the control of the railroads which had participated in the combination.

It was further provided in the contracts that if the earnings of the Temple Iron Company were not sufficient (a) to set aside a sinking fund of 15 cents for every ton mined, (b) to pay the interest on the bonds, and (c) to provide for a stock reserve equal to 3 per cent on its stock, each guaranteeing railroad should pay 12½ cents for every ton of coal produced by the Temple Iron Company and transported by the guarantor as the initial line. In case there was still insufficient revenue to meet the obligations of the Iron Company, including 6 per cent on its capital stock, the railroads agreed that they would make up the deficiency on the basis of the percentage guaranteed by them, regardless of the

¹ *Files of Interstate Commerce Commission in Hearst Case*, pp. 853-854.

² *Ibid.*, p. 580.

³ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 354.

⁴ This was true up to the time of the suit recently brought by the Government to dissolve the combination of railroads through the Temple Iron Company. For the decision of the Supreme Court in this case, see p. 215.

proportion of the output of the Iron Company carried by each.¹ Under this guarantee, payments were made to the Trust Company in 1899, 1900, and 1902. During those years the guaranteeing railroads advanced \$483,000 in all to the Temple Iron Company to enable it to meet its obligations.² Since 1902, however, the operations of the Iron Company have been profitable, and further contributions have not been necessary.³ By the middle of June, 1909, stimulated possibly by a Government prosecution,⁴ these advances had all been repaid, and in addition, the Temple Iron Company had redeemed out of its surplus all but \$800,000 of its outstanding bonds.⁵

The collieries of Simpson and Watkins having been acquired (in 1899), it became necessary to apportion their tonnage among the railroads. The principle upon which this distribution was to be made had already been determined upon. Mr. Baer testified "it was generally understood that the transportation as it existed at the time of the transfer of the collieries should not be disturbed."⁶ This understanding was carried out. Within the next few years, the Temple Iron Company, either directly or through its subsidiary corporations, entered into contracts with the several railroads, or their subsidiary coal companies, agreeing to sell for the life of the mines the output of its newly acquired collieries.⁷ None of the properties acquired by the Iron Company were tributary to the Reading Railroad, which, through its president, Mr. Baer, had taken such an active part in the negotiations. The Reading gained, however, through the elimination of an unsettling railway factor, and through the transportation of the iron business of the Temple Iron Company, which Mr. Baer maintained was profitable enough to justify the Reading in taking part in the transaction.

This combination, it will be noted, embraced only the Reading, the Central of New Jersey, the Lehigh Valley, the Lackawanna,

¹ *Transcript of Record in Sherman Anti-Trust Case*, i, pp. 139-140.

² *Ibid.*, ii, p. 333.

³ *Ibid.*

⁴ See pp. 212-213.

⁵ *Transcript of Record in Sherman Anti-Trust Case*, v, p. 1119.

⁶ *Files of Interstate Commerce Commission in Hearst Case*, p. 832.

⁷ *Transcript of Record in Sherman Anti-Trust Case*, v, pp. 1092-1093.

the Erie, and the New York, Susquehanna and Western, controlling among them over two-thirds of the total traffic. Yet all of the other anthracite coal roads, except the Pennsylvania, have, since 1899, at some time or other, been represented on the directorate of the Temple Iron Company.¹ Thus though the attempt to defeat the construction of the Wyoming and Western Railroad through the Temple Iron Company was not directly participated in by all the anthracite coal-carrying railroads, yet each of them, with the exception of the Pennsylvania, has been represented upon the directorate of the instrument used in this manoeuvre. This phase of the matter, however, will receive further treatment in the discussion of the method whereby the anthracite coal roads have maintained harmony in the coal trade.²

Though the purchase of the collieries of Simpson and Watkins by the Temple Iron Company had caused the abandonment of the New York, Wyoming and Western, yet another attempt was made in the same year by the individual operators to secure an independent market for their coal. The leader in this second attempt was the Pennsylvania Coal Company, the largest of the independent operators, producing in 1899 about 2,000,000 tons of coal.³ The Pennsylvania Coal Company owned 51 per cent of the stock of the Erie and Wyoming Valley Railroad, a gathering line, mainly from the mines of the Pennsylvania Coal Company. This road extended from a point near Scranton in the Northern field to Lackawaxen, Pennsylvania, where it connected with the Erie Railroad. That part of its line extending from Hawley to Lackawaxen, however, had been leased to the Erie.⁴ The Pennsylvania Coal Company proposed to extend the Erie and Wyoming Valley Railroad from Hawley to Lackawaxen (on the boundary line between Pennsylvania and New York), and it incorporated the Delaware Valley and Kingston Railroad Company to extend from Lackawaxen across the State of New York to Rondout on the Hudson river, thus making a connected inde-

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 156.

² See pp. 151 *et seq.*

³ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 477.

⁴ *Files of Interstate Commerce Commission in Hearst Case*, pp. 1052-1053.

pendent line to tide-water. The proposed extension from Lackawaxen to the Hudson river required the assent of the Railroad Commission of New York, as under the laws of New York a new railroad could not be built unless the Commission certified it to be necessary.¹ The application for a certificate was filed in December, 1899, and, in spite of the opposition of several railroads, was unanimously granted.² The Pennsylvania Coal Company thereupon purchased for its roadbed the abandoned canal of the Delaware and Hudson Company from Lackawaxen to Rondout, and secured adequate terminal facilities at Rondout,³ whence the coal could be shipped to New York Harbor or to Albany. The Pennsylvania Coal Company was a prosperous corporation with a large accumulated surplus, and was well able to carry its project to a successful outcome.

In order to secure coal traffic, the Pennsylvania Coal Company proposed to pay the operators who entered into contracts with it 65 per cent (instead of 60 per cent) of the tide-water price, the contracts to extend throughout the life of the colliery.⁴ The new project received the active support of the individual operators. The Anthracite Coal Operators Association in November, 1899, pledged "constant support and active assistance" to the project as a prospect of relief from the "unreasonable rates" charged by the railroads.⁵ The principal promoter of the new railroad testified that a majority of the individual operators in the Northern region would have shipped over the new road, being able to do so by the expiration of their contracts with the railroads, or the railroad coal companies.⁶ No contracts were executed, however, as the agreement to sign was dependent upon the construction of the railroad. And the road was never built. At the earnest solicitation of Mr. Thomas,⁷ the president of the Erie Railroad, which had been carrying the product of the Pennsylvania Coal

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, pp. 389-391.

² *Ibid.*, ii, p. 474; also pp. 389-391.

³ *Ibid.*, ii, p. 477.

⁴ *Ibid.*, ii, pp. 479-480.

⁵ *Ibid.*, i, pp. 360-361.

⁶ *Ibid.*, ii, p. 474.

⁷ *Ibid.*, v, p. 1085.

Company, and which was, therefore, the railroad most affected, the banking firm of J. P. Morgan and Company undertook to purchase a majority of the shares of the Pennsylvania Coal Company. This stock acquired with great difficulty and at a high price was, together with all the stock of the Erie and Wyoming Valley Railroad and of the Delaware Valley and Kingston Railroad, turned over to the Erie in January, 1901, for \$32,000,000, payment being made in 4 per cent bonds payable in fifty years. In addition, a commission of \$5,000,000 was paid to J. P. Morgan and Company, in the form of first preferred voting trust certificates.¹ Through this purchase of the Pennsylvania Coal Company and its allied railroads the Erie secured permanently the tonnage of the Pennsylvania Coal Company, which, through the Erie and Wyoming, was carrying in 1899 nearly 5 per cent of the total anthracite coal shipments, and, in addition, it acquired the large reserve supply of the Pennsylvania Coal Company, which consisted in 1896 of nearly 12,000 acres, or nearly twice the acreage owned by the Erie through its own subsidiary coal company.² At about the same time that the Erie was making these purchases, the New York, Ontario and Western, through its subsidiary coal companies, the Elk Hill Coal and Iron Company and the Scranton Coal Company, which were acquired in 1898 and 1899 respectively,³ was buying out a large number of the operators who had pledged tonnage to the new railroad.⁴ The Ontario lent these companies the money with which to purchase the collieries, and they then contracted to deliver to the Ontario the total output of the new plants.⁵

Through these purchases by the Erie and the New York, Ontario and Western, the second attempt in the year 1899 to construct a competing railroad was frustrated, and a large number of independent operators, including the largest engaged in the business, were eliminated from the situation as competitive factors.

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 155; also ii, p. 488.

² *Ibid.*, iii, Exh. 157.

³ *Ibid.*, iii, Exhs. 115, 116.

⁴ *Industrial Commission*, ix, p. 589.

⁵ *Files of Interstate Commerce Commission in Hearst Case*, Exh. 37 in i of Exhs.

Since 1900 numerous other firms have been purchased by the different railroads or by their subsidiary coal companies. The Delaware and Hudson Company acquired in March, 1901, the entire capital stock (\$100,000) of the Hudson Coal Company.¹ The Hudson Coal Company in 1905 acquired the entire capital stock of the Schuylkill Coal and Iron Company, and of the Shanferoke Coal Company, capitalized at \$1000 and \$5000 respectively.² The Susquehanna Coal Company, whose entire capital stock is now owned by the Pennsylvania Railroad, acquired in 1904 \$628,000 of the \$800,000 capital stock of the Lytle Coal Company³ with a production in 1907 of over 400,000 tons.⁴ The Summit Branch Mining Company, capitalized at \$25,000, also owned by the Pennsylvania Railroad, acquired in 1902 \$482,450 of the \$494,150 capital stock of the Lykens Valley Coal Company,⁵ producing in 1907 nearly 450,000 tons.⁶ Between the years 1900 and 1905 the Lehigh Valley Railroad bought the Seneca Coal Company, the Connell Coal Company, the Warrior Run Mining Company, the Righter Coal Company, and the Wyoming Coal and Land Company, with a combined production for the year in which they were purchased of well over a million tons.⁷ These purchases were made by the Lehigh Valley Railroad, as President Thomas testified, to make sure that the tonnage stayed on the Lehigh Valley, where it belonged.⁸ The stock of these companies was later transferred to the Lehigh Valley Coal Company,⁹ but the railroad company and the coal company were so obviously one that there was then little danger that the tonnage would ever be lost to the railroad. In 1905 the Scranton Coal Company, whose entire capital stock is owned by the New York, Ontario and Western, purchased the Black Diamond Coal

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 123. This company was organized under a different name on June 2, 1871.

² *Ibid.*

³ *Ibid.*, iii, Exh. 134.

⁴ *Ibid.*, iii, Exh. 139.

⁵ *Ibid.*, iii, Exhs. 132, 133.

⁶ *Ibid.*, iii, Exh. 169.

⁷ *Ibid.*, iii, Exh. 170; and v, p. 768.

⁸ *Ibid.*, v, p. 1087.

⁹ *Ibid.*, v, p. 782.

Company, with a capital stock of \$27,000.¹ In the same year the Erie Railroad acquired the Jermyn estate,² one of the large independent operations.

An important purchase was that of Coxe Brothers and Company by the Lehigh Valley Railroad in 1905. Coxe Brothers was, at this time, the largest independent firm in the field, possessing over 5000 acres of coal lands,³ and mining in 1905 over 1,300,000 tons.⁴ It owned, also, the Delaware, Susquehanna and Schuylkill Railroad (a gathering line with 50 miles of track in the Lehigh region), which had been built in 1890-1892 in order to connect the collieries of Coxe Brothers with a number of railroads to tide-water. In 1905, however, Coxe Brothers was shipping its output and that of the other collieries on its line over the tracks of the Lehigh Valley, the cars and crews being supplied and manned by the Delaware, Susquehanna and Schuylkill Railroad, the Lehigh Valley providing merely the track. The entire capital stock of Coxe Brothers (\$2,910,150), and the stock of its controlled railroad (\$1,500,000) and \$60,000 of the stock of four subsidiary companies were purchased by the Lehigh Valley Railroad, on November 1, 1905, for the sum of \$19,000,000. The Lehigh Valley Railroad financed the transaction through the issue of \$19,000,000 collateral trust bonds bearing 4 per cent interest. It pledged as security therefor the stocks of the purchased companies,⁵ with the exception of a few shares retained to be used in qualifying directors. Though the firm of Coxe Brothers was purchased by the Lehigh Valley Railroad, its business was carried on by officers and directors, who were also officers and directors of the Lehigh Valley Coal Company,⁶ and the entire output of Coxe Brothers was turned over at the mines to the Coal Company. Coxe Brothers, likewise, early in 1906 assigned to the Lehigh Valley Coal Company its contracts with the Harwood

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 116.

² *Mineral Industry*, iv, p. 82.

³ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 59.

⁴ *Ibid.*, iii, Exh. 170.

⁵ *Annual Report of the Lehigh Valley Railroad*, 1906, pp. 14, 34-35.

⁶ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 58.

Coal Company and with Pardee Brothers and Company,¹ whose combined production in 1907 was over 800,000 tons.² The Delaware, Susquehanna and Schuylkill Railroad is now being operated by the Lehigh Valley Railroad.

President Thomas gave the following account of the circumstances attending the purchase of Coxe Brothers by the Lehigh Valley. He said that Mr. Alexander Coxe, a member of the Lehigh Valley board, came to him some months prior to the purchase, and told him that he thought of getting out of the business; that he had had unexpectedly a large offer for his coal property, but because of his connection with the Lehigh Valley Railroad he preferred to have the Lehigh acquire it. Mr. Coxe made an offer, which he, Mr. Thomas, believed was a bona fide one. Having received this offer, Mr. Thomas narrates, "I went to our bankers and I asked them if I could have a certain amount of money without disclosing the purpose. They told me I could. The result was that I negotiated the transaction, notified our people of what I had done, and asked authority to go on and close the transaction, which I did."³ The Pennsylvania Railroad was at this time carrying west the greater part of the output of Coxe Brothers and Company. It objected to the purchase, but Mr. Thomas maintained that the tonnage originated on the line of the Lehigh Valley, and that he proposed to keep it.

The cases cited above illustrate the elimination of the independent operators by purchase.

(2) Elimination of the independent operators by means of the percentage contracts.

These numerous purchases by the railroads of coal properties brought about the elimination of a large number of independent operators, yet they offered no assurance that the attempt to secure an independent outlet to tide-water would not be renewed by the independent operators yet remaining in the field. If, however, the total output of the independent operators could be tied up by means of perpetual contracts, extending throughout the whole life of the colliery, a recurrence of such projects would

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 634.

² *Ibid.*, iii, Exhs. 169-170.

³ *Ibid.*, v, p. 1084.

apparently be prevented forever. The contracts in the early eighties, running for varied terms, had netted the individual operator from 40 to 45 per cent of the tide-water price. This percentage was increased when the New York, Susquehanna and Western, entering the Wyoming field in 1882, offered to pay the operators 50 per cent of the tide-water price, as this forced the other railroad companies to pay the same rate. In 1890 the New York, Ontario and Western built an extension into the Northern coal field, and secured tonnage by agreeing to transport coal for 40 per cent of the tide-water price, which was equivalent to giving the operator 60 per cent of the tide-water price, the expense of selling, however, to be borne by the operator. The Ontario later agreed to buy the coal outright and to pay therefor 55 per cent of the tide-water price. The other railroads soon offered the same terms.¹

The percentage contract system was not at this time, however, the customary mode of marketing the independent output. Its introduction as a general system was in considerable measure due to the influence of Mr. McLeod, president of the Reading Railroad.² It will be recalled that it was a part of the plan of the combination of 1892 to tie up the output of the independent operators by means of long-term contracts. The Philadelphia and Reading Coal and Iron Company had contracted in 1892 to buy the output of the Lehigh Valley Coal Company and of the Lehigh and Wilkes-Barre Coal Company, controlled by the Lehigh Valley Railroad and the Central of New Jersey respectively. It paid therefor 60 per cent of the average f. o. b. prices at tide-water. Contracts on this same basis were entered into, also, with many individual operators. Mr. Fuller, who had a 55 per cent contract, testified that Mr. McLeod voluntarily raised his percentage in 1892 to 60 per cent, and even dated the contract back a year, thus giving him the benefit of the higher percentage for the previous year also.³ Several other railroads made similar contracts with the individual operators, though the

¹ H. S. Fleming, Secretary of Anthracite Coal Operators Association, *Twenty-second Annual Report of the U. S. Geological Survey*, 1900-1901, pt. 3, pp. 110-111.

² *Industrial Commission*, ix, p. 562.

³ *Transcript of Record in Sherman Anti-Trust Case*, ii, pp. 481-482.

period during which the contract was to remain in force varied. In most cases the contracts were to extend for seven years, but some were for a shorter period, and others until all the coal from the colliery covered by the contract had been removed.

In 1899 a large number of the 60 per cent contracts expired. The New York, Wyoming and Western Railroad, projected as an independent road, offered to pay the operators 65 per cent of the tide-water price, and made a number of contracts on that basis. The project, however, was defeated by the purchase of the mines of its main supporters, and the road was never built. The independent operators continued their efforts, however, to get an increased price for their coal, and supported the Pennsylvania Coal Company in its attempt to build an independent route, by pledging their tonnage to the Coal Company in return for 65 per cent of the tide-water price. The contracts were to become effective when the road was completed. They never went into effect, as the mines of the promoter of the new railroad were purchased by the Erie Railroad, and this put an end to the project.

Previous to the purchase of the Pennsylvania Coal Company and the consequent failure of the operators to obtain an increased price for their coal, there had taken place in the coal fields in 1900 a widespread strike. A presidential campaign was then in progress. Mr. Hanna, chairman of the Republican National Committee, represented to the railroad interests that unless the strike were settled, it might extend to the bituminous states, and endanger the election of Mr. McKinley. The miners agreed to go back to work, provided their wages were advanced 10 per cent. After much pressure by Mr. Hanna, the principal railroads, or their coal companies, assented to the wage increase. The miners refused to resume work, however, until all of the coal operators, including the individual operators, had granted the advance.¹ The individual operators, before making any concessions, appointed a committee in October, 1900, to confer with the presidents of the transportation companies, and to learn whether there was to be a reduction in freight rates to cover the advance in wages. This committee reported in favor of granting

¹ *Transcript of Record in Sherman Anti-Trust Case*, i, pp. 98-99.

the increase in wages, though it was unable to exact from the railroad presidents participating in the conference a definite promise that the freight rates would be reduced, or that the percentage of the tide-water price to be paid the individual operators would be increased. It reported that the presidents, including the representatives of the Reading, the Central of New Jersey, the Lehigh Valley, the Lackawanna, and the Erie, had expressed their sympathy with the individual operators, and had intimated that something would be done to improve the condition of the coal business.¹ The individual operators seem to have been convinced that there was considerable prospect of securing a better price for their coal, and they, therefore, appointed "a committee with full power to adjust all differences with certain transportation companies, which shall have delegated full power to a committee, and negotiate and agree upon a basis of contract which shall definitely and for a period of years fix the commercial relations between the said operators and the said transportation companies."² A large number of the operators present at the meeting signed the resolution endowing the committee with full power to agree upon a contract form, each operator, however, reserving the right to make a separate contract for himself.³ This committee met with a committee of the transportation companies, consisting of representatives of the Reading, the Central of New Jersey, the Lehigh Valley, the Lackawanna, and the Erie, and they agreed upon a form of contract.⁴ This form of contract was recommended to the individual operators by the committee, Mr. Howe, one of the committee for the operators, expressing the belief that they had gotten the best terms that they could from the railroads.⁵ In accordance with this recommendation, a large number of the operators, being for the most part those who had previously had 60 per cent contracts, signed in 1900 and 1901 the 65 per cent contracts, and since then, an

¹ *Transcript of Record in Sherman Anti-Trust Case*, vi, Temple Iron Company Exhs., no. 7, pp. 30-32.

² *Ibid.*, p. 32.

³ *Ibid.*, pp. 32-33.

⁴ *Ibid.*, ii, p. 316.

⁵ *Ibid.*, ii, p. 224.

additional number of operators have entered into contracts upon the same basis.

The most important provisions of the 65 per cent contracts are (in substance and in condensed form):

1. The Seller sells and agrees to deliver on cars at the breaker to the Buyer *all the Anthracite Coal hereafter mined*¹ from any of its mines now opened and operated, or which it may hereafter open and operate, on the premises intended to be covered by this contract, and any which shall be reclaimed from culm banks on said premises.

2. *Shipments to be made* from time to time *as called for by the Buyer*. The Buyer to give, on the twenty-fifth day of each month, notice of the quantity, as nearly as practicable, Buyer will require for the next month, and arrange to take the coal in as nearly equal daily or weekly quantities *as in its judgment the requirements of the market will permit*. The Buyer to use its best efforts to find a market for the Seller's coal so as to enable the Seller's collieries to be worked as many days as practicable, with due regard to the general market conditions, and to give orders for shipment which will enable the Seller to work its collieries as many days in each year as other collieries similarly situated work.

3. The Buyer agrees that it will not discriminate in favor of its own mines, or any persons, firms or companies with which it has contracts to buy coal, but that the quantity to be ordered monthly shall be a just proportion of the entire quantity of coal agreed to be purchased by the Buyer, measured by the colliery capacity of the respective Sellers. The colliery capacity shall be determined as of the first of January in each year by the parties hereto, and, on their failure to agree, the president for the time being of Girard Trust Company shall select a suitable expert for this purpose.

4. The Buyer agrees to pay and the Seller agrees to accept the following prices for said coal, when delivered f. o. b. railroad cars at the breaker: *For all sizes above Pea coal, sixty-five (65) per cent of the general average free on board prices of said sizes* (from the

¹ Italics supplied by the author.

same trade region) received at tide points at or near New York, between Perth Amboy and Edgewater, computed as hereinafter provided. For Pea coal, fifty (50) per cent of the general average f. o. b. price for Pea coal when the said price is \$2.50 per ton or less, and an advance in the percentage with an increase in the price above \$2.50. For Buckwheat coal No. 1, 40 per cent of the general average f. o. b. price, and for sizes smaller than Buckwheat No. 1, 25 cents per ton f. o. b. railroad cars at the breaker with provision in both cases for an increase in the rate with an increase in the price received at tide.

5. The general average f. o. b. prices herein referred to shall be determined by a disinterested expert accountant satisfactory to both parties, to whom the Buyer shall furnish, not later than the 8th of each month, a statement of the quantity of each size sold during the preceding month, and the amount realized therefor by the Buyer at tide on all sales of each size of coal from the region covered by the contract, and the average prices thus obtained (for each trade region) shall be furnished by the accountant to the Buyer and Seller, by whom they shall be accepted in the settlement between Buyer and Seller. All statistics given such accountant shall be treated by him confidentially, and the resulting averages only shall be given to Buyer and Seller.

6. If any default shall be made by the Buyer in any payment, the Seller may, at its option, declare this contract forfeited by giving notice of such default for a period of at least five days, and of its intention to terminate this contract, unless payment shall be made in the meantime.

7. The Seller will consign and manifest said coal to such points and parties as the Buyer shall from time to time direct, and will furnish and send to the Buyer such copies of manifests and such notice relating to coal shipped as the Buyer may direct.

8. In the event of any disagreement as to the quantity to be ordered, or the actual price of coal at tide, or on any other question to be decided under the terms hereof by arbitration, it shall be determined by a Board to be known as the Permanent Board of Arbitration, which shall consist of three persons: one person selected by the Seller; the president of the Buyer company to be

the second person; and the president for the time being of Girard Trust Company to be the third person.

9. If by reason of changes in trade or colliery conditions the Seller is unable to operate its mines without financial loss on the basis of this contract, and the Buyer declines to modify this agreement, the Seller may submit the questions involved to the said Board of Arbitration, and if the Board decides that the Seller cannot operate its mines without loss on the basis of this contract, and if the Buyer and Seller cannot agree on a modification of this contract, then this contract shall cease.

10. It is also agreed that if at any time the average f. o. b. price at tide-water for sizes of coal larger than Pea shall be less than \$3.50 per ton, then the Seller may at its option temporarily suspend mining and cease all deliveries hereunder until the said average price shall reach \$3.50 per ton; provided, however, that two weeks' notice of intention to stop deliveries shall in such case be given by the Seller to the Buyer.¹

The most important changes introduced in the new contracts were the increase in the percentage of the tide-water price, and the provision that the contract should cover the total future output of the colliery, the contracts of 1892 having usually provided only for the total production of the colliery during the period of the contract. The individual operators at last secured the increased price for which they had been contending so long. They obtained it, however, at a great cost. They practically surrendered forever their independence, agreeing to sell to the railroad, or its subsidiary coal company, their entire future output, to be delivered in such quantities, and at such times as the buyer dictated. Mr. Simpson of the old firm of Simpson and Watkins testified before a United States Examiner in a recent suit that the railroads would not give him a contract for his coal, unless he made the contract extend for the life of the collieries.² Judge Buffington found that it was shown by the testimony "that the perpetuity

¹ *Files of Interstate Commerce Commission in Hearst Case*, Exh. no. 121. Contract between Hillside Coal and Iron Company and Lackawanna Coal Company, typical of the 65 per cent contracts. See also 65 per cent contract, *Industrial Commission*, ix, pp. 505-507.

² *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 447.

clause was insisted on and inserted in the contracts thereafter by the combined action of the defendant railroads and their coal companies in order to withdraw from competition for all time the freights of these producers.”¹

The percentage contracts just described were adopted in the form outlined only by the five important coal interests which had participated in the conferences with the individual operators, viz., the Reading, the Central of New Jersey, the Lehigh Valley, the Lackawanna, and the Erie. The railroads or the coal companies not taking part in these conferences did not demand that the new contracts should extend for the life of the mines. In most cases, however, they entered into contracts with the individual operators which were substantially similar to those described. Over the greater part of the anthracite field, therefore, the percentage contracts thus prevailed.

These contracts offered, it is true, certain obvious advantages to the individual operators, — the advantage of selling their coal directly to the railroads and thus not having to maintain sales offices and sales agents in the trade centers, and the advantage of saving the costs of insurance, storage and loss from bad debts. The operators were able to avoid thereby, also, the uncertainty in securing cars when they were most needed.² A fair idea of the difficulties against which the operator, attempting to market his own product in competition with the owners of the cars, had to contend is indicated by a letter of Mr. Haddock, a prominent operator, written in 1899 to President Truesdale of the Lackawanna Railroad:

I am fully aware that the dominant and controlling influence in the former management declared, within a very recent period, that the company would go to any length to get rid of me. This statement . . . rests upon the word of a gentleman of unquestioned veracity, and I venture the opinion, that the malicious purpose so expressed, has been made fully manifest, in the delayed deliveries, the confiscation of coal, and the removal of switches from the yards of our consignees in the more recent shipments to the northern mar-

¹ 183 Fed. Rep. 473.

² “The Anthracite Coal Combination has been less successful than the Standard Oil Company; but its method of crushing small rivals by denying them transportation facilities has made it almost equally notorious.” Hadley, *Railroad Transportation*, p. 68.

kets. . . . While I have every reason to believe these recent and violent attempts to injure us and our consignees was not the result of your wish or instructions, nevertheless, they are in keeping with the traditional policy of the company. . . . My sole desire has been and is now, to obtain a recognition of the substantial justice of our claims for the exactions of the past, my right to have reasonable transportation charges in the future, and to be relieved of needless interference with the conduct of our business.¹

Mr. Haddock testified before the Interstate Commerce Commission that in the seven or eight years prior to 1901 he had lost \$800,000, because of his refusal to sign the contracts. A compromise was finally reached whereby the railroad paid him \$150,000.²

However, the chief explanation why so many of the individual operators signed the contracts with the perpetuity clause is that the railroads were willing to allow them a larger profit than could be made by marketing their coal independently, provided they (the railroads) could thereby strengthen their control over prices, and in addition protect themselves against an invasion of their territory by an independent line. That the individual operators under the new contracts were allowed a larger profit is clear from the table on the following page.

Column I of the table gives the average price received by the Lehigh Valley Coal Company for coal shipped to tide-water from the Wyoming region.³ Column II shows the cost price to the Lehigh Valley Coal Company of the coal purchased from the operators under the 65 per cent contracts. This does not represent 65 per cent of Column I, that is, the average price received by the Lehigh Valley Coal Company, but 65 per cent of the general average price of all stove coal shipped from the Wyoming region,⁴ this average price being determined by the Bureau of Anthracite Coal Statistics in accordance with the provisions of the contracts. Column II, therefore, shows the amount received by each operator under contract shipping from the Wyoming region.

¹ Letter of Mr. J. C. Haddock, April 10, 1899, to President Truesdale of the Lackawanna Railroad. *Files of Interstate Commerce Commission in Hearst Case*, Exh. 32.

² *Ibid.*, pp. 3306, 3326.

³ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 15.

⁴ *Ibid.*, iii, Exh. 11.

RESULTS OF 65 PER CENT CONTRACTS OF LEHIGH VALLEY COAL COMPANY, NOVEMBER, 1900, TO DECEMBER, 1901, IN RESPECT TO STOVE COAL SHIPPED FROM THE WYOMING REGION OVER THE LEHIGH VALLEY RAILROAD TO PERTH AMBOY (NEW YORK HARBOR), F. O. B. VESSEL¹

	Col. I Average Price Received at Perth Amboy	Col. II Cost Price	Col. III Expense of Selling	Col. IV Wastage	Col. V Amount Left for Freight	Col. VI Published Freight Rate to Perth Amboy	Col. VII Deficiency
Nov. 1900	4.32	2.80	.10	.05	1.37	1.55	.18
Dec. 1900	4.32	2.87	.10	.05	1.30	1.55	.25
Jan. 1901	4.36	2.88	.10	.05	1.33	1.55	.22
Feb. 1901	4.39	2.88	.10	.05	1.36	1.55	.19
Mar. 1901	4.40	2.86	.10	.05	1.39	1.55	.16
April 1901	3.91	2.57	.10	.05	1.19	1.55	.36
May 1901	4.08	2.65	.10	.05	1.28	1.55	.27
June 1901	4.19	2.70	.10	.05	1.34	1.55	.21
July 1901	4.29	2.77	.10	.05	1.37	1.55	.18
Aug. 1901	4.37	2.83	.10	.05	1.39	1.55	.16
Sept. 1901	4.47	2.90	.10	.05	1.42	1.55	.13
Oct. 1901	4.49	2.91	.10	.05	1.43	1.55	.12
Nov. 1901	4.49	2.91	.10	.05	1.43	1.55	.12
Dec. 1901	4.47	2.91	.10	.05	1.41	1.55	.14

¹ Table prepared by the Government in suit to dissolve the anthracite coal combination as being in violation of Sherman Anti-Trust Act. Brief for the United States in Sherman Anti-Trust Case, pp. 374-376. See Biblio. no. 156. The original figures have been examined, the fairness of the estimates involved approved, and the results tested by the author. An analysis of the financial results of the contracts of the Lehigh Valley Coal Company has been made, (a) because the results for this company are typical of the results for the other coal companies, yet underestimate rather than exaggerate the discrimination, (b) because this company handles a large output under contract, (c) because the Lehigh Valley especially has been involved in litigation designed to separate the railroad and the coal interests, and conclusions for this company are, therefore, of especial interest. Stove coal has been chosen as typical of the prepared or domestic sizes. Where the results for stove coal vary from those obtained for the other sizes the discrimination is less rather than greater, thereby avoiding the charge that extreme cases have been chosen in order to make the discrimination appear as great as it was possible to make it. Most of the percentage contracts were adopted in 1901. They were generally made retroactive to November, 1900, and therefore the operation of the contracts for the first fourteen months has been analyzed.

The expense of selling is fairly estimated for the prepared sizes at 10 cents a ton,¹ and the waste incident to abrasion of the coal in transit, which is borne by the Lehigh Valley Coal Company, is about 5 cents a ton. The balance, after having deducted the amount paid the individual operators, the selling costs, and wastage, is the sum available for the payment of the freight rate. The amount by which this falls short of the published tariff² is given in Column VII, the significant column for our purposes. It shows that on stove coal purchased from the individual operators under the 65 per cent contracts and shipped to tide-water, the Lehigh Valley Coal Company received as available for transportation charges from 12 to 36 cents a ton³ less than the published freight rates. This indicates the amount the Lehigh Valley Coal Company was willing to pay in order to secure control of the independent output, and thus guard itself effectively against the recurrence of the troublesome attempts of dissatisfied operators to invite invasion of the territory by an independent line.

There is now, however, little fear of trouble to the combination from this source. By the two methods of purchase and contracts in perpetuity the independent operator has been largely eliminated as a factor in the conduct of the trade.⁴

¹ Testimony, *Transcript of Record in Sherman Anti-Trust Case*, ii and iii.

² *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 160.

³ This assumes that Column I, the average price received at Perth Amboy, including as it does the coal mined by the Lehigh Valley Coal Company, represents the average price received from the sale of the coal of the individual operators. This is substantially the case, though subject to a very slight correction.

⁴ It remains to be seen how the recent decree of the Supreme Court, ordering the cancellation of these perpetual contracts, will affect the situation.

CHAPTER V

THE PRODUCTION OF COAL

IN the previous chapter is given the history of the organization of an effective combination. In this chapter, and the two succeeding, consideration will be given to the production, transportation, price and sale of coal, and the extent to which these are controlled by a combination. Attention is directed, then, first to the production of coal.

THE GROWTH OF THE TRADE

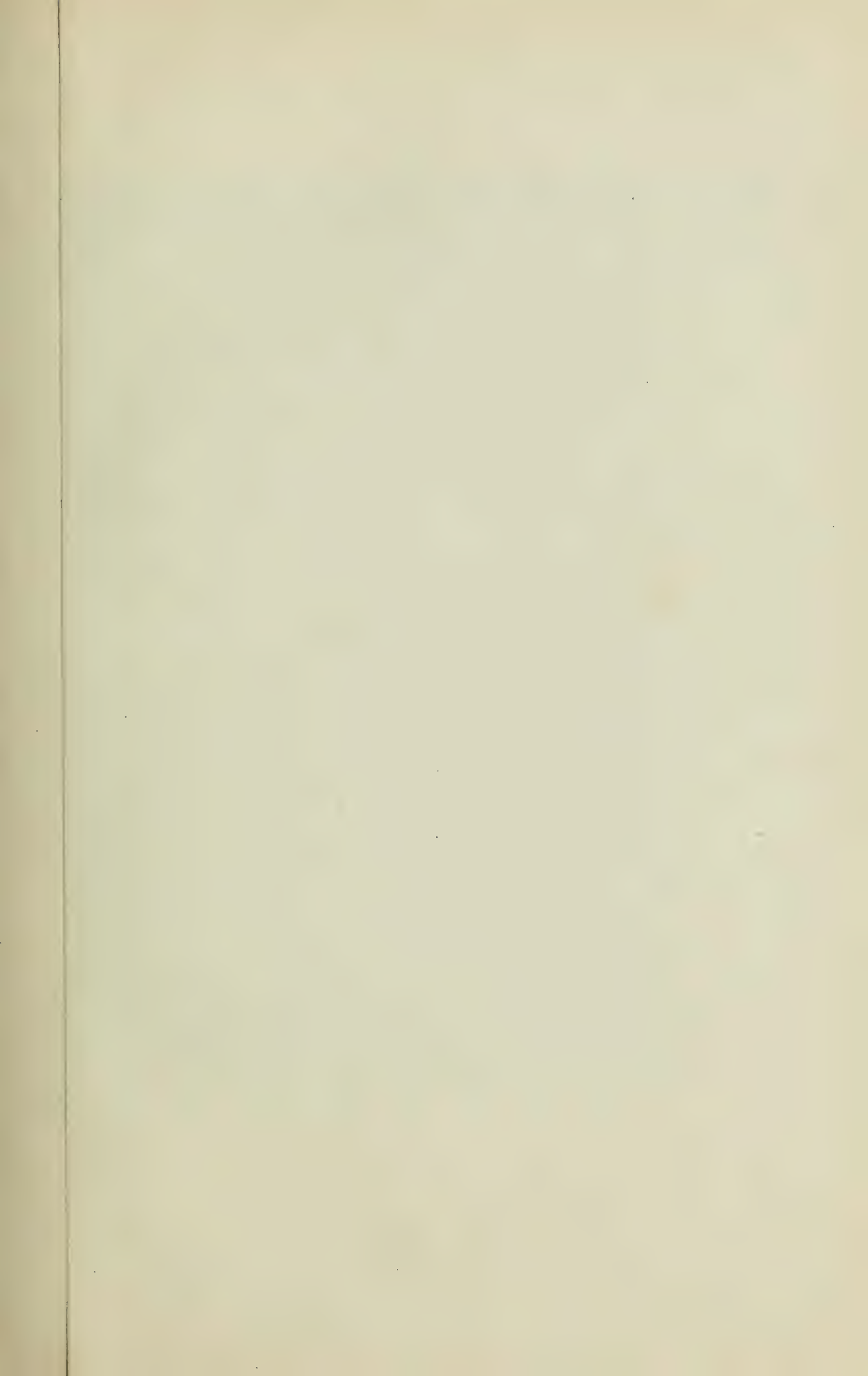
The development of the trade from 1821 to 1910 is summarized in the following table¹ showing the average shipments for five and ten year periods from 1821 to 1910.

	Average for Five Year Period (ooo, omitted)	Average for Ten Year Period (ooo, omitted)		Average for Five Year Period (ooo, omitted)	Average for Ten Year Period (ooo, omitted)
1821-1825.....	11	.....	1871-1875.....	19,297	.....
1826-1830.....	95	53	1876-1880.....	21,302	20,299
1831-1835.....	393	.....	1881-1885.....	30,350	.....
1836-1840.....	795	594	1886-1890.....	35,071	32,711
1841-1845.....	1,395	.....	1891-1895.....	42,666	.....
1846-1850.....	3,023	2,209	1896-1900.....	43,897	43,282
1851-1855.....	5,449	.....	1901-1905.....	52,607	.....
1856-1860.....	7,346	6,398	1906-1910.....	62,689	57,738
1861-1865.....	9,043	.....		
1866-1870.....	13,908	11,476			

An examination of this table and of the appended chart reveals the fact that the production² of anthracite coal, though showing a very great percentage increase from 1820 to 1840, was still quite small in 1840, the average production for the five years 1836-1840 being less than 1,000,000 tons. From 1841 to 1865 the

¹ Compiled from Appendix, Table I. In order to secure connected figures for the growth of the trade from the beginning it has been found necessary to use the shipments of coal. The total production of coal is, at the present time, about 15 per cent in excess of the shipments to market.

² This term, for the sake of convenience, is frequently used in the following pages, though the figures refer to shipments, not actual production.



Million
tons
(2,240 lbs.)

YEARLY SHIPMENTS

from 1921 to 1960

averaged 1921-1960

65
60
55
50
45
40
35
30
25
20
15
10
5
0

'21-'25

'26-'30

'31-'35

'36-'40

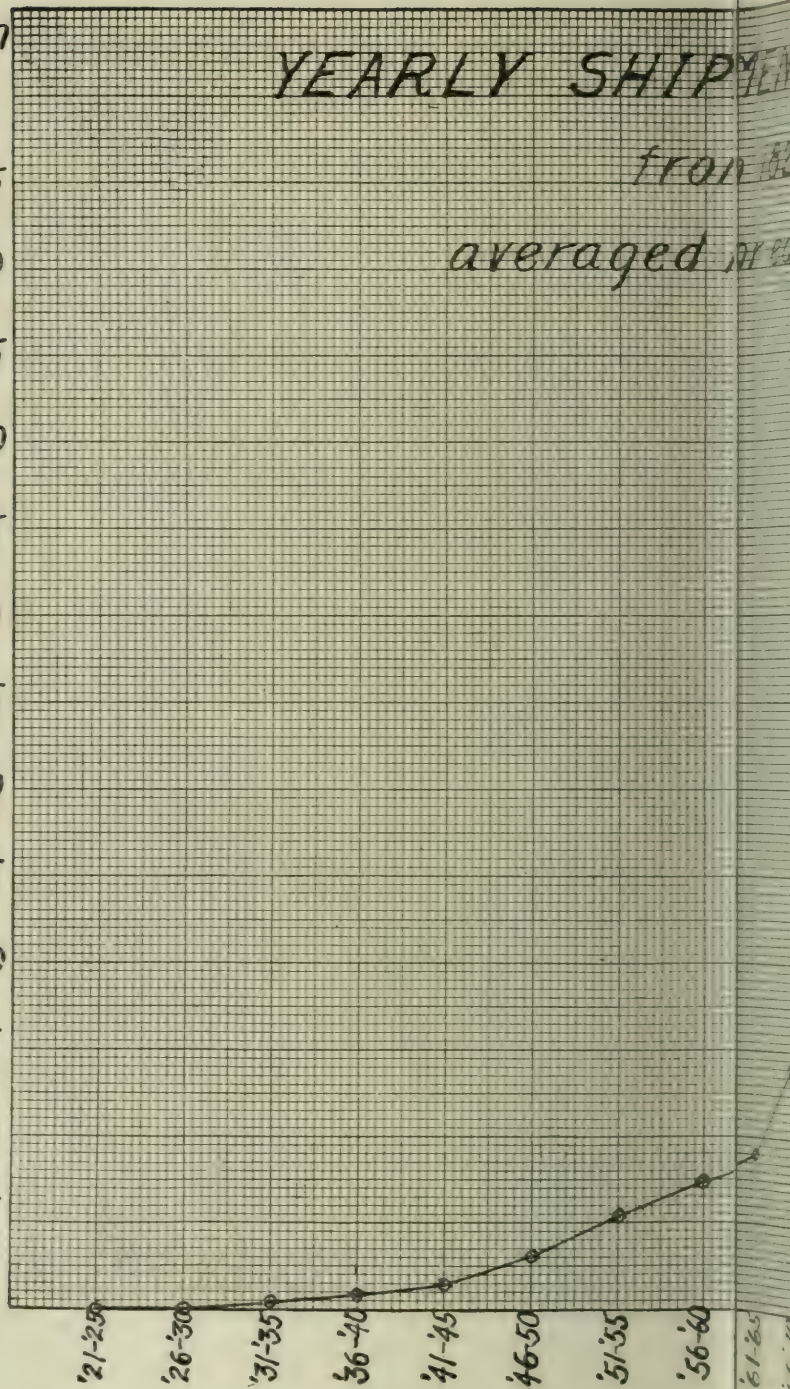
'41-'45

'46-'50

'51-'55

'56-'60

'61-'65



MENTS of ANTHRACITE COAL

1820 to 1910

for each 5-year period

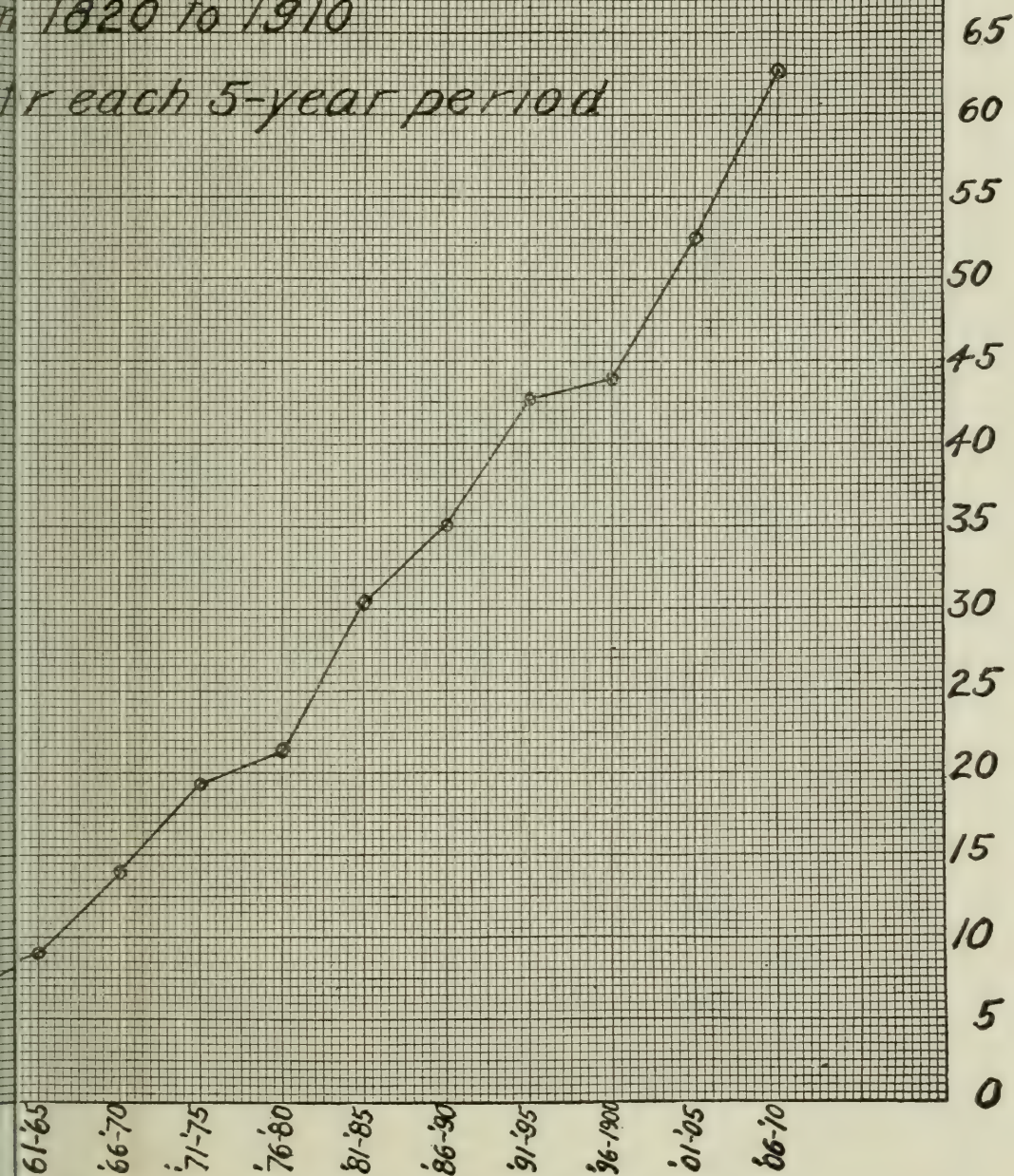


CHART II

quinquennial increase was about 2,000,000 tons. As the result of the demand created by the Civil War, the trade grew rapidly in the decade 1866-1875, the quinquennial increase averaging over 5,000,000 tons. The next five year period was, in the main, one of industrial depression, and the production increased but slightly. During most of the fifteen years which followed, these conditions were reversed. The average production of coal increased over 9,000,000 tons during 1881-1885, over 6,000,000 tons during 1886-1890, and over 7,000,000 tons during 1891-1895. The output remained practically stationary during the next five year period (1896-1900), but since then has grown very fast, increasing nearly 9,000,000 tons for the five years 1901 to 1905, and over 10,000,000 tons for the years 1906 to 1910. The production has increased approximately 10,000,000 tons in each decade since 1861, although the increase was somewhat greater in the decade 1901 to 1910.

The rapid growth of the trade in recent years is shown in further detail by the following table and chart,¹ giving the annual shipments from 1898 to 1913.²

Years	Annual Shipments of Coal	Years	Annual Shipments of Coal
1898.....	41,8	1906.....	55,6
1899.....	47,6	1907.....	67,1
1900.....	45,1	1908.....	64,6
1901.....	53,5	1909.....	61,9
1902.....	31,2	1910.....	64,9
1903.....	59,3	1911.....	69,9
1904.....	57,4	1912.....	63,6
1905.....	61,4	1913.....	69,0

The production in 1898 was 41.8 million tons. In 1899 it had increased to 47.6 million, or nearly 6,000,000 tons greater than in 1898, yet only slightly above the production of 1895. Two years later, in 1900, the amount was even less than in 1895, declining to 45.1 million tons. The year 1900 was noteworthy in that the output in that year was limited to the requirements of the market. Since 1900, however, there has been a considerable growth, the production increasing from 45.1 million to 53.5

¹ See p. 101.

² See Appendix, Table I for exact figures.

million tons in 1901. In 1902, as the result of the bitter strike which caused a cessation of mining operations for several months, the output declined to 31.2 million tons. In the following year, however, it increased to 59.3 million, or nearly 6,000,000 tons in excess of the maximum up to that time. No marked changes took place until 1906. In this year a suspension of mining operations for several weeks, pending the adjustment of the wage scale, caused the production for the year to fall as low as 55.6 million tons, but this loss was more than recovered in 1907, when the shipments rose to over 67,000,000 tons, again nearly 6,000,000 tons greater than the previous record. The attainment of this record in 1907 is significant as a severe panic began in the month of October, and was followed by a prolonged period of industrial depression. In spite of this unfavorable element, the shipments for November, 1907, were larger than in any other November in the history of the trade, and the shipments in the following year, though less than in 1907, were yet over 3,000,000 tons in excess of those of any previous year. This indicates that anthracite coal is of relatively small importance for industrial purposes, and that the demand for it is therefore less affected by general business conditions. In 1909 there was a further suspension of mining operations, and consequently the production again declined, nearly reaching the level of 1905. In the following year, 1910, however, there was an increase to the figure of 1908, and in 1911 the output again increased, nearly reaching 70,000,000 tons, which was approximately 3,000,000 tons greater than the previous high water mark. In 1912 the production of anthracite declined to 63.6 million tons. This falling off was due entirely to the suspension of mining operations from April 1 to May 20, pending the settlement of the demands of the miners for certain changes in the wage agreement. In the following year the output increased to 69,000,000 tons, which was just a little below the record attained in 1911. In spite of this rapid increase in the production of coal the demand is now about equal to the present capacity of the mines.¹

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, pp. 551-552. What future increase in output there is, will probably come, in the main, from an increase in the

Yearly Ship

Million
tons
(2,240 lbs.)

70

65

60

55

50

45

40

35

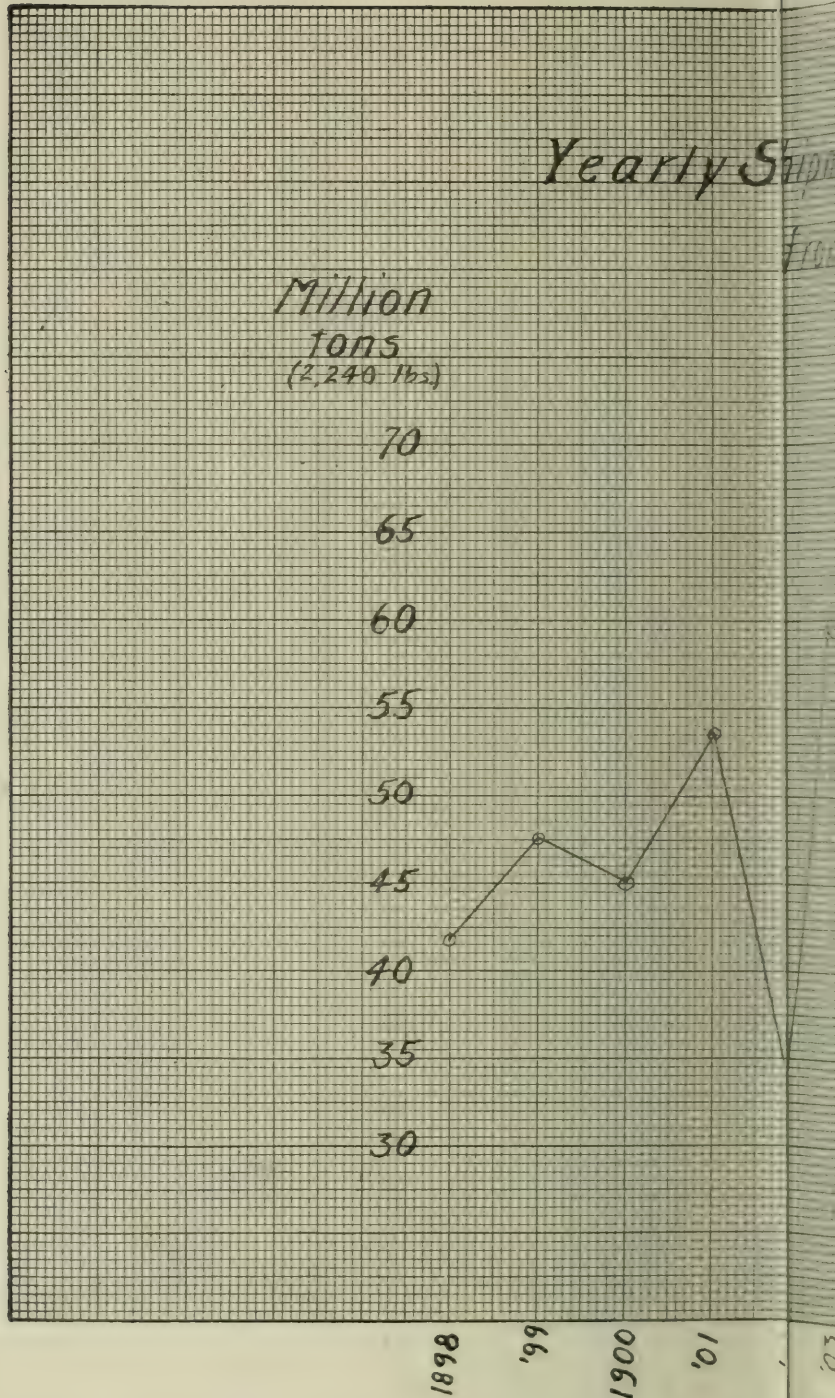
30

1898

'99

1900

'01



*Shipments of Anthracite Coal
from 1898 to 1913*

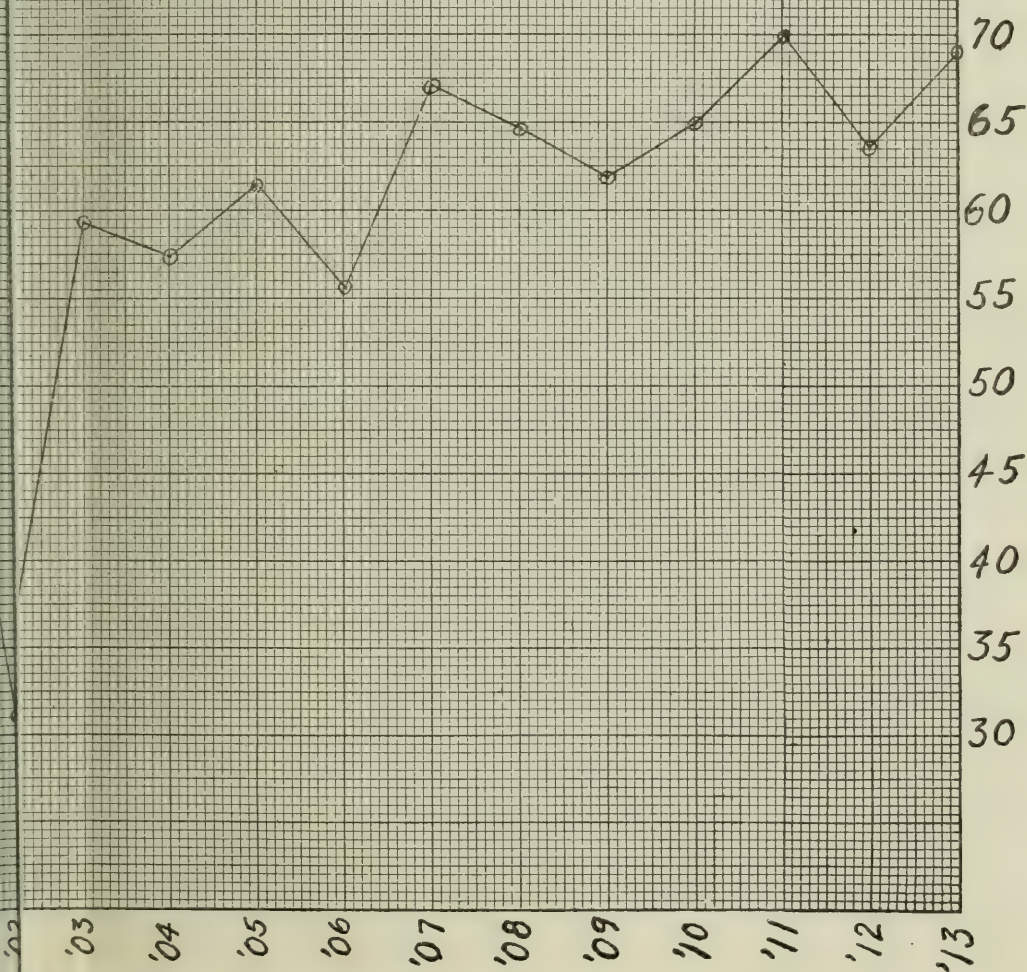


CHART III

PRODUCTION BY REGIONS

Much the greater part of this enormous output of coal has been, since the early seventies, the product of the Wyoming or Northern field, which has supplied a steadily increasing proportion of the total shipments. The greater development of this region is evident from an examination of the chart on page 103.¹ In 1830 only about one-fourth of the total shipments of anthracite coal came from the Wyoming region. Another fourth came from the Lehigh region, the balance being the output of the Schuylkill region. In 1840 the proportion of the Wyoming region had declined to one-sixth of the total shipments, the increase going to the Schuylkill region. It was not until after 1840 that the Wyoming region began to develop rapidly. By 1850 it was again producing one-quarter of the total production, its output in that year passing that of the Lehigh field. The greater part of the total shipments, however, still came from the Southern or Schuylkill field, which in 1850 furnished well over half of the total. By 1860 the Wyoming field was shipping one-third of the total production, the increase being secured at the expense of the Schuylkill field, — the Lehigh field, as before, just about holding its own. In 1867 the shipments from the Wyoming region, for the first time since the shipments have been regularly recorded, exceeded those from the Schuylkill field, and by 1870 the product of the Northern field constituted about one-half of the total output. The Schuylkill field at this time was normally yielding about one-third of the total production, the balance coming from the Lehigh region. Since 1870 there has been a continued increase in the proportion of the shipments coming from the Wyoming region, and a corresponding decline in the proportion of the other two regions. In 1875 the output of the Northern field exceeded for the first time the combined output of the other two regions, and since 1884 its output regularly has been greater than that of

number of days during which the mines are worked. The average number of days worked in 1911 was 246, which was greater than for several years previous. *Mineral Resources*, 1911, pt. 2, p. 172.

¹ See Appendix, Table I, for table of shipments, giving figures on which the chart is based.

the other two regions combined. The normal contribution of the Wyoming field for several years has been about 60 per cent of the total shipments, while the Schuylkill field regularly contributes about 28 per cent, and the Lehigh field about 12 per cent.

The Wyoming field is of greater importance than the Lehigh field as it has more extensive deposits. The Wyoming deposits, however, are less than one-half those of the Schuylkill field.¹ Its more rapid development is to be explained primarily by the character of the deposits. A large part of the coal in the Wyoming region is to be found within 1000 to 1200 feet of the surface. The cost of mining, therefore, is generally less than in the Schuylkill field, where the coal as a rule lies much deeper, the Lykens Valley measures in the Schuylkill field extending as far as 4000 feet below the surface.² The most expensive mining is in the Schuylkill region, where the veins are quite distorted, and the quantity of water which must be lifted is enormous. President Baer has estimated that the cost of mining in the Schuylkill field is from 40 to 50 cents a ton greater than in the Wyoming field.³ The bulk of the product of the future, however, must come from the Southern field. Mr. Norris, a specialist in mining engineering, testified in 1914 that the Wyoming region is probably at its apex of production, the Lackawanna end of this region being already on the down grade; that the Lehigh region could not be expected to produce nearly as much as the other fields; and that the portion of the Schuylkill called the Western Middle field, embracing the Mahanoy and the Shamokin basins, had probably already reached its maximum production.⁴ The great reserve of the future is located in the Schuylkill field. The chart, if extended into the future, would certainly show a reversal of the earlier developments. Just when the product of the Wyoming field will begin to decline relatively to that of the Schuylkill field cannot be predicted, but

¹ *Penn. Commission to Investigate the Waste of Coal Mining*, 1893, p. 121.

² *Industrial Commission*, xix, p. 445.

³ *Transcript of Record in Sherman Anti-Trust Case*, v, pp. 1175-1176.

⁴ Interstate Commerce Commission investigation of rates, practices, rules and regulations governing the transportation of Anthracite Coal, xxxviii, p. 4545. See Biblio. no. 198. Referred to hereafter as *I. C. C. Investigation of Anthracite Rates*.

Percentage of total
shipped from
in first year
and in years

Percent

60

55

50

45

40

35

30

25

20

15

10

year

1830

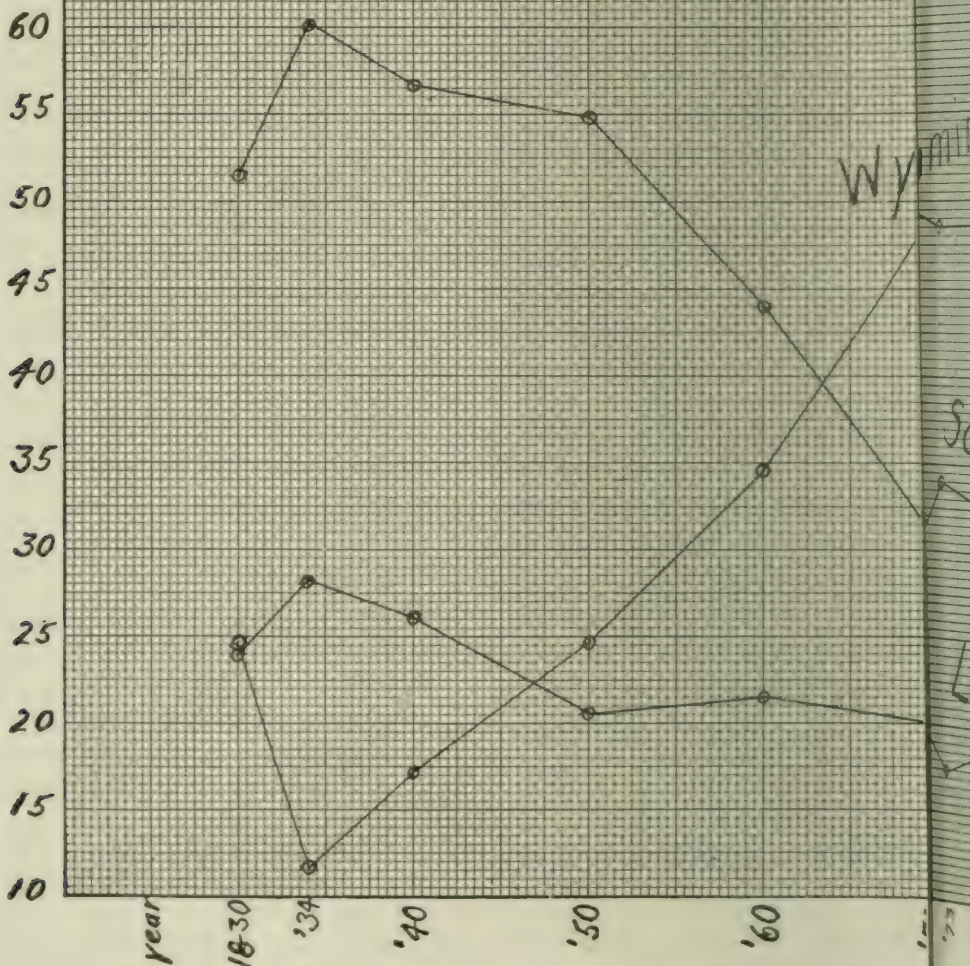
'34

'40

'50

'60

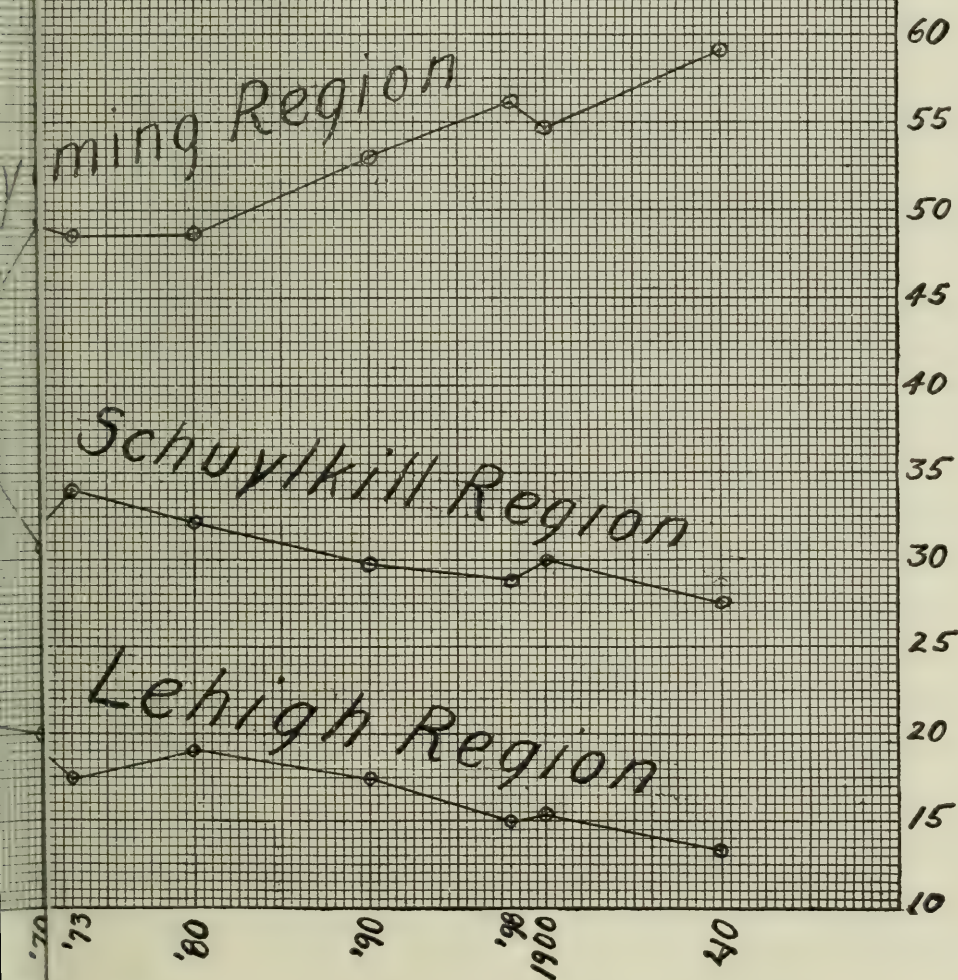
'73



CHART

Anthracite Coal each Region each decade

1815, 1834, 1873, 1898



the time is sure to come, and when it does come, the cost of mining at the lower levels will be materially increased, — unless, indeed, this can be offset by improvements in the arts which will effect a reduction in mining costs.

PRODUCTION BY COMPANIES

Most of the anthracite coal now produced is mined by the railroads, or by their subsidiary coal companies, which are referred to hereafter as the railroad coal companies,¹ including the coal departments of roads like the Lackawanna, which has always mined its coal directly. The table² on page 104 gives the production in 1907 of each railroad coal company and of the remaining operators not controlled by the railroads, and also the proportion of the total output of coal mined by each railroad coal company and by the remaining operators during the years 1900–1907.

The railroad coal companies in 1907 produced nearly 80 per cent of the total output. By far the largest producing company, in spite of the fact that its coal lands are located mainly in the Southern field, where the cost of mining is greater, was the Philadelphia and Reading Coal and Iron Company, producing, in 1907, 12.3 million tons, or 16 per cent of the total. Upon the exhaustion of the deposits in the other fields, this company, in the future, will become of even greater importance than it is at present. The second largest company was the Lackawanna Railroad, which mined directly 12 per cent of the total output. The Reading Coal and Iron Company, and the Lackawanna Railroad, therefore, together produced considerably more than all of the independent operators in the whole anthracite basin. The other coal producing companies in the order of their importance were: the Lehigh Valley Coal Company, owned by the Lehigh Valley Railroad; the Delaware and Hudson Company, and its subsidiary concerns; the Pennsylvania Coal Company, and the Hillside Coal and Iron Company, both owned by the Erie Railroad; the Susquehanna Coal Company, and the other coal companies con-

¹ For the relation of these coal companies to the railroads, see pp. 113 *et seq.*

² *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 169. Figures are actual production, not shipments to market.

trolled by the Pennsylvania Railroad; the Lehigh and Wilkes-Barre Coal Company, controlled by the Central Railroad of New Jersey; the Lehigh Coal and Navigation Company, closely affiliated with the Central of New Jersey; the Scranton Coal

Operator	In Percentages								Million Tons, 1900 Omitted 1907
	1900	1901	1902	1903	1904	1905	1906	1907	
P. & R. C. & I. Co. . .	16.17	15.88	15.02	14.96	15.46	16.35	15.87	16.01	12.304
L. & W. B.	6.01	6.11	5.52	5.94	5.86	5.95	5.93	5.79	4.451
L. V.	6.13	6.61	6.84	8.62	8.55	9.54	10.28	10.51	6.676
Coxe . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	1.394
Lackawanna	9.61	10.49	11.95	11.48	11.91	11.34	12.61	12.04	9.249
D. & H.	8.37	9.10	9.52	9.64	8.97	8.94	9.36	9.50	6.661
Penn. Coal Co. . . . .	.....	6.33	8.22	7.27	6.74	7.02	7.21	7.59	4.246
H. C. & I. Co.	1.48	.....	.....	.....	.....	.....	.....	.....	.....
T. I. Co.	2.59	2.57	2.35	2.47	2.49	2.40	2.58	2.67	2.053
Penn. R. R.	5.58	5.60	4.69	5.89	6.19	5.93	6.69	6.44	4.943
Ontario	2.23	3.58	4.00	3.42	3.66	3.46	3.24	3.35	2.576
L. C. & N. Co. ¹	3.87	2.97	2.77	3.02	3.20	3.52	3.85	4.14	3.178
Total	62.04	69.24	70.88	72.71	73.03	74.45	77.62	78.04	59.960
All other operators . .	37.96	30.76	29.12	27.29	26.97	25.55	22.38	21.96	16.875
Grand total	100%	100%	100%	100%	100%	100%	100%	100%	76.836

P. & R. C. & I. Co. = Philadelphia and Reading Coal and Iron Co.

L. & W. B. = Lehigh and Wilkes-Barre Coal Company, controlled by the Central Railroad of New Jersey.

L. V. = Lehigh Valley Coal Company.

Coxe = Coxe Brothers and Company.

Lackawanna = Lackawanna Railroad.

D. & H. = Delaware and Hudson, and Hudson Coal Company.

Penn. Coal Co. = Pennsylvania Coal Company.

H. C. & I. Co. = Hillside Coal and Iron Company, controlled by the Erie Railroad.

T. I. Co. = Temple Iron Company.

Penn. R. R. = Susquehanna Coal Company and other subsidiary coal companies controlled by the Pennsylvania Railroad.

Ontario = Scranton Coal Company and Elk Hill Coal and Iron Company, controlled by the Ontario Railroad.

L. C. & N. Co. = Lehigh Coal and Navigation Company.

Company, and the Elk Hill Coal and Iron Company, owned by the New York, Ontario and Western; and the Temple Iron Company, jointly owned by several of the carriers.²

The proportion of the total output mined by the railroad companies has steadily increased. In 1900 the combined production of the railroad coal companies was 62 per cent of the total out-

¹ See pp. 118-119 for the relation of this company to the anthracite carriers.

² The Supreme Court in December, 1912, declared this joint ownership of the Temple Iron Company illegal. See p. 215.

put, while the operators not controlled by the railroads produced 38 per cent of the total. By 1901, through the purchase of the Pennsylvania Coal Company by the Erie, and the purchase of a number of independent operators by the New York, Ontario and Western, the output of the railroad coal companies had increased to nearly 70 per cent of the total. The acquisition of individual properties continued in the years which followed. In 1905 the large firm of Coxe Brothers and Company was purchased by the Lehigh Valley, and a number of smaller properties were absorbed by other railroad companies. By 1907 over three-fourths (78.04 per cent) of the total output of anthracite coal was being mined by the railroad coal companies, while less than 22 per cent was mined by the remaining operators. The largest individual operator at this time was the Kingston Coal Company, producing in 1907 slightly over 1.5 million tons, yet 425,855 tons of this were mined for the Lackawanna Railroad, and practically all of the balance was sold to various railroad coal companies. This was the only independent company with a production of over a million tons. There were eight other companies in 1907, producing over a half million tons, but all of these, with one exception, sold practically all their coal at the mines to the railroad coal companies,¹ — hence they were not important competitive factors.

In 1907, as we have seen, the anthracite coal roads, either directly or through their affiliated coal companies, produced 59,960,287 tons, or 78.04 per cent of the total production of anthracite coal. This does not indicate fully, however, the completeness of their control over the output of coal. The production of the individual (and independent) operators in 1907 was 16,875,795 tons. This includes the 425,855 tons mined by the Kingston Coal Company but belonging to the Lackawanna Railroad. Deducting this amount the independent output is reduced to 16,449,940 tons, or 21.41 per cent of the total production. But, it will be remembered, a large number of the individual operators had entered into long term, and in many cases perpetual, contracts with the railroad coal companies, whereby

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 170.

they agreed to deliver at the mines to the coal companies all the coal mined by them.¹ The output thus bound by contract² in 1907, was 7,427,634 tons.³ This tonnage, for all practical purposes, was as thoroughly controlled by the railroad coal companies with whom the contracts had been made, as if it had been produced directly by them. It should therefore be added to their production in order to ascertain the extent of their control over the output. After deducting from the independent output the tonnage sold to the railroad coal companies under the percentage contracts, the independent operators are in control of only 9,022,306 tons, or 11.74 per cent of the total production. The railroad coal companies controlled, therefore, 88.26 per cent of all the coal mined. One further deduction, however, still remains to be made. A number of the individual operators sold their total output, or a portion thereof, to the railroad coal companies under contracts based upon the 65 per cent contracts, but extending only for a year or in some cases terminable at will by either party. The amount so sold to the railroad coal companies in 1907 was 2,335,918 tons.⁴ These purchases placed the railroad coal companies in control, in the year 1907, of 70,149,694 tons, or 91.3 per cent of the total production. Therefore, though the individual (and independent) operators mined in 1907 nearly 22 per cent of all the anthracite coal produced, yet so much of this was bound in various ways to the railroad coal companies that only 8.7 per cent of the total production could be classed as really independent.

The data for bringing these figures down to date are not obtainable (the figures for 1907 were collected by the Government in a suit to dissolve the coal combination), but an estimate of the present situation can be made that is substantially accurate. The report of the State Department of Mines for 1911 (the latest issued at the date of writing⁵) gives by districts the production

¹ See pp. 91-93.

² Includes two-thirds of the output of the Pine Hill Colliery, approximately one-third being free and really independent.

³ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 170.

⁴ *Ibid.*

⁵ April, 1914.

of each anthracite mining company. From the figures in this report one may conclude that in 1911, as in 1907, the independent concerns mined and controlled less than one-tenth of the total output, while the railroad companies mined and controlled over nine-tenths.

DISTRIBUTION OF THE UNMINED TONNAGE

A consideration of the unmined area shows that the proportion of the total output mined by the independent operators will steadily decline. The amount of anthracite coal yet in the ground can be estimated with a fair degree of accuracy. The most reliable estimate of this nature is that of Mr. William Griffith, a mining engineer and geologist, who, from the fullest data available, including that collected by the Pennsylvania Geological Survey, of which he had been a member, estimated in 1896 the amount of minable coal then in the ground which would be available for shipment to market; the distribution thereof among the principal owners; and the duration of the supply controlled by each interest, using the shipments in 1895 as a basis. The results are summarized in the table¹ on the next page.

The individual (and independent) operators not controlled by a transportation company owned, in 1896, 9.07 per cent of the unmined tonnage available for shipment to market.² Since 1896, as the result of the buying out of a large number of operators, the holdings of the railroad coal companies have been considerably increased. It is obvious, therefore, that the proportion of the unmined coal owned by the independent operators has declined. In spite of this decline, these operators as late as 1907 mined nearly 22 per cent of the total output. Yet it is clearly impossible for them to maintain this proportion, inasmuch as they own less than 9 per cent of the unmined tonnage. A steady decline in

¹ William Griffith, *Bond Record*, 1896. See *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 157.

² All of the coal not owned by the railroad coal companies has been classified as belonging to the independent operators. Some of this may have been undeveloped and separately owned. But the tonnage owned by the independent operators certainly did not exceed 9.07 per cent of the total.

DISTRIBUTION OF THE UNMINED TONNAGE
(As of January 1, 1896. 000, omitted in each case)

Owner	Unmined Coal Owned	Per cent	Owned and Controlled by Contract	Per cent	Duration on Basis of Shipments in 1895
P. & R. C. & I. Co.	2,087,490	41.14	2,143,706	42.25	216
L. & W. B. }	863,760	17.02	877,569	17.30	163
L. C. & N. Co. ¹ }					
L. V.	787,200	15.52	855,511	16.87	116
Lackawanna.	300,853	5.93	332,332	6.55	54
D. & H.	115,823	2.28	115,823	2.29	26
Susq. Coal Co. & Affil. Co's	248,142	4.89	316,502	6.24	63
H. C. & I. Co.	34,718	.68	38,879	.77	21
Penn. Coal Co.	94,876	1.87	94,876	1.82	54
N. Y. S. & W. Coal Co.	13,551	.27	26,890	.54	18
Scranton Coal Co. ....	.....	....	13,971	.28	9
Coxe.	67,361	1.33	69,901	1.38	35
Remainder.	460,008	9.07	187,822	3.71	
Grand Total.	5,073,786	100.00	5,073,786	100.00	

their relative output, therefore, is to be expected. Yet just how long their production will continue is difficult to predict with assurance. If we assume that all of the 460,000,000 tons of unmined coal, which were not controlled by the railroad coal companies in 1896, were owned by the independent operators, and that 25 per cent of the shipments to market from 1896 to 1907 was produced by them,² and that their unmined supply has not been increased, which is a reasonable assumption in view of the large purchases of independent properties by the railroad companies, then the independent operators would have owned in 1907 not over 300,000,000 tons of coal available for shipment to market. This estimate, however, makes no allowance for improvements in mining, which have made it possible to extract a larger percentage of the coal in the ground than was possible in 1896, thus increasing the independent tonnage by approximately 50 million tons. If we assume further that the independent operators will continue to produce about 20 per cent of the total

¹ The unmined tonnage of the Lehigh Coal and Navigation Company is included in that of the Lehigh and Wilkes-Barre Coal Company in Mr. Griffith's table.

² That this is a conservative estimate will be evident from an examination of the table, p. 104.

production, then by the year 1933 their mines will have been exhausted, and there will no longer be any independent companies. The date, however, at which we may expect them to disappear finally may be somewhat later as a gradual decline in their output is probable rather than a steady maintenance of the same proportion of the total output. We may certainly look, however, in the comparatively near future for the elimination of the independent element, unless, indeed, new conditions shall arise through the enactment of additional (and effective) legislation, state or national.

The railroad coal companies (including the Pennsylvania Coal Company, Coxe Brothers and Company, and the Scranton Coal Company, all of which were later acquired by some of the anthracite carriers) owned in 1896, 90.93 per cent of the unmined coal. If, in addition, the future tonnage controlled by them through contracts be included, they owned and controlled 96.29 per cent

UNMINED ANTHRACITE COAL

owned and controlled by contract, in 1896

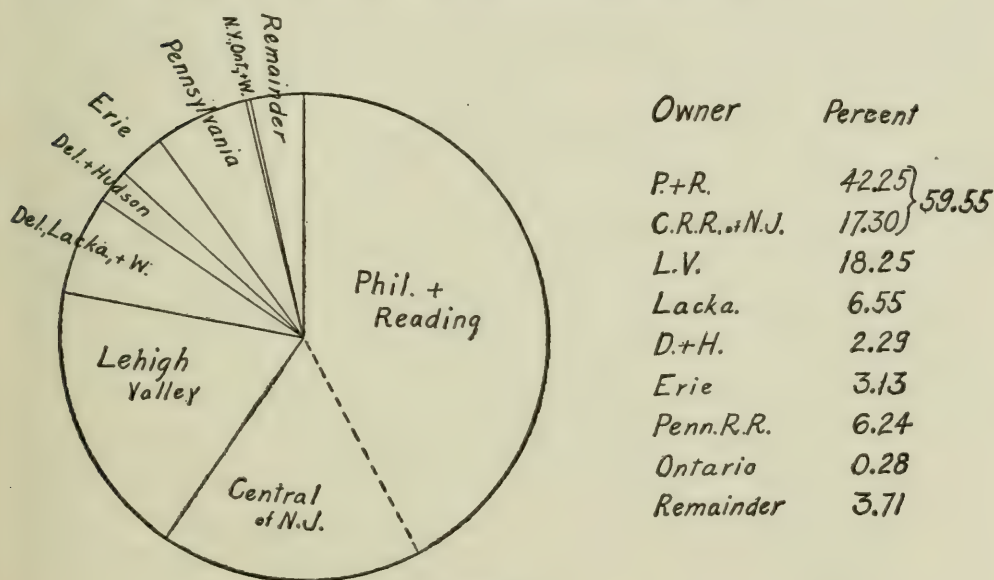


CHART V

of the tonnage available in the future, only 3.71 per cent being in private hands. By far the largest coal owner was the Philadelphia and Reading Coal and Iron Company, owning, or controlling by contract, 42.25 per cent of the total tonnage. Its

supply, on the basis of its shipments in 1895, would last for 216 years. Next in importance was the Lehigh and Wilkes-Barre Coal Company, and its affiliated company, the Lehigh Coal and Navigation Company, which together owned 17.31 per cent of the future tonnage, estimated to last 163 years. Including the output of these two companies, the Reading Company in 1896 owned and controlled, therefore, about 60 per cent of all the anthracite coal yet remaining in the ground. The Lehigh Valley Coal Company owned 16.87 per cent of the future supply, estimated to last 116 years, or including the tonnage of Coxe Brothers, later acquired by the Lehigh Valley Railroad, it owned 18.25 per cent. These three leading companies owned, therefore, 77.80 per cent, or nearly four-fifths of the total amount of unmined coal. The proportional division among the other companies of the remaining one-fifth is shown by the table and chart.

The foregoing estimate of the unmined tonnage as of 1896 has not been brought down to date, and figures are not available for the present distribution of our coal deposits. Such evidence as is available, however, indicates that there have been no material changes in the ownership of the unmined tonnage.¹

THE RESERVE SUPPLY

Reference has been made to the limited character of the anthracite deposits. How large the remaining supply is, and how long it may be expected to last, was the subject of an investigation by a Pennsylvania Commission, appointed in 1893 to investigate the waste of coal mining. This Commission estimated that the original contents of the anthracite coal beds were 19,500,000,000 tons, divided among the three regions as follows:

Wyoming.....	5,700,000,000	29.2 per cent
Lehigh.....	1,600,000,000	8.2 "
Schuylkill.....	12,200,000,000	62.6 "

¹ For a comparison of the number of acres of coal lands owned by the different companies in 1896 and 1907, see William Griffith, *Bond Record*, 1896, and *Transcript of Record in Sherman Anti-Trust Case*, iii, Exhs. 1, 31, 32, 45, 46, 60, 71, 82, 84, 118, 125, 136.

The shipments of coal to market from 1820 to 1892 inclusive were 820,000,000 tons. If we add 10 per cent as the excess of the production of coal above the shipments to markets, the total amount of coal mined up to 1893 was about 902,000,000 tons. The Commission estimated, however, that for every ton of coal produced one and a half tons were lost. The production, therefore, represented only 40 per cent of the actual exhaustion. The amount of coal actually used up by 1893 was thus 2,255,000,000 tons, and the amount remaining was estimated at 17,245,000,000 tons.¹ From 1893 to the close of 1903 approximately 550,000,000 tons were mined, which (on the basis of a 40 per cent recovery) represented an exhaustion of 1,375,000,000 tons, leaving 15,870,000,000 tons yet unmined. It is probable that since 1903 nearer 50 per cent of the coal has been won. The production from 1904 to 1913 inclusive was about 730,000,000 tons, which (on the basis of a 50 per cent recovery) involved an exhaustion of 1,460,000,000 tons. This would leave an unmined tonnage at the end of 1913 of approximately 14,400,000,000 tons.

Other estimates of the future supply have been made, among the most important of which is that of Mr. Griffith. He estimated that the supply of coal available for shipment to market in 1896 was 5,073,786,750 tons.² The Coal Waste Commission had estimated in 1893 that there were 17,245,000,000 tons of marketable coal in the ground, which (on the basis of a 40 per cent recovery) meant a probable production of 6,898,000,000 tons. This figure includes local consumption, which was not included in Mr. Griffith's estimate. To make the figures comparable 10 per cent should be added to Mr. Griffith's estimate, and allowance should be made for the exhaustion from 1893 to 1895 inclusive. Upon this basis Mr. Griffith, in 1893, would have estimated the future production as about 5,900,000,000 tons, an estimate which differs only 12 per cent from the figures of the Pennsylvania Commission. It should be noted, further, that Mr. Griffith's estimate, being prepared for a New York banking house, was intentionally conservative. The Commission more or

¹ *Penn. Commission to Investigate the Waste of Coal Mining*, 1893, p. 148.

² William Griffith, *Bond Record*, June, 1896, p. 501.

less anticipated improvements in mining, whereas Mr. Griffith was not expected to make any such allowance.¹ If allowance be made for the increased amount of coal which may be won through improvements in mining, there is but a slight variation in the two estimates.

How long the reserve supply of coal, estimated at 14,400,000,000 tons, may be expected to last depends upon the percentage of recovery and upon the future production. Expert engineers in the employ of the railroads have testified that they hoped "to get very nearly two-thirds of the coal in the ground to market, or better."² The amount of the coal which can be won depends on the character of the veins, and the introduction of improvements. Since there is the likelihood of considerable variation in the proportion of the coal won in different veins, and since as mining proceeds to lower levels, more coal must be left in the ground as pillars for the protection of the workings, the more conservative estimate of a recovery of 60 per cent has been made the basis of this calculation. Upon this basis the amount of coal which may reasonably be expected to constitute the supply of the future is about 8,640,000,000 tons.³ Should the average production for the last five years (roughly 75,000,000 tons) continue, the supply of anthracite coal will last about 115 years. This estimate serves to indicate only roughly the probable duration of the supply. The results of the calculation may be modified by the winning of a much larger proportion of the coal. While most scientific methods are employed in anthracite mining, yet there is always the possibility of improvements, which will permit the utilization of a greater amount of coal. The future output of coal, also, is not a predictable factor. Production has increased almost steadily in past years in spite of frequent assertions that it

¹ Testimony of William Griffith, *Transcript of Record in Sherman Anti-Trust Case*, ii, pp. 558-559.

² *Transcript of Record in Sherman Anti-Trust Case*, iv, p. 413.

³ This figure does not include the increase in the available supply of the future through the mining of old beds, which had been abandoned years ago as unprofitable, but which under modern mining methods can be worked at a profit. The failure to include this increased supply, the amount of which cannot be accurately determined, is an additional reason for regarding the estimate of a 60 per cent recovery as a conservative one.

had reached its maximum,¹ and it may continue to increase in the future. Thus the improvements in mining may just offset the increased production, or the production may decline and both factors work toward extending the duration of the supply. Sooner or later, as a matter of course, the production will begin to decline. Some of the coal beds are already exhausted, and portions of others are rapidly approaching exhaustion. When the most available deposits have been used up, the deeper beds will be worked more and more. As mining proceeds to lower levels the cost of mining will increase. The resulting rise in price will operate to lessen the demand for coal, and to reduce correspondingly its production. Hence it is likely that some anthracite coal will be available for several hundred years to come. But long before the supply is exhausted, the march of invention may result in the discovery of new fuels, thus relieving us of our dependence upon anthracite as a domestic fuel.

RELATION OF THE RAILROADS TO THE MORE IMPORTANT COAL MINING COMPANIES

We have seen in the preceding pages that the railroad coal companies control practically the entire future supply of coal, and mine much the greater part of the present production. It becomes of interest, then, to note in some detail the relation which these coal companies, designated as the railroad coal companies, bear to the railroads.² Upon examination they will clearly be seen to be for practical purposes one and the same, the coal companies being merely devices, whereby the railroads do

¹ In the annual report of the Lehigh Coal and Navigation Company for 1868 it was stated that "the opinion is very prevalent among thinking men, who have given attention to the subject, that the maximum annual production of anthracite coal is not many years distant." Forty-four years later the report of the Delaware, Lackawanna and Western Railroad states that "in all probability the maximum annual production of anthracite coal from the Pennsylvania fields has been reached."

² The situation is described in the main as of 1913. The latest data, however, have not always been available. Where this is the case, resort has been had to the mass of facts contained in the *Transcript of Record in the Sherman Anti-Trust Case*, showing the situation in 1908. In each instance, it is believed, it will be apparent from the text and from the authority cited as of what date the relationships indicated hold true.

indirectly that which they are forbidden by the Constitution of the State to do directly.

The largest company is the Philadelphia and Reading Coal and Iron Company, producing in 1911, 13.6 per cent of the total output. This company, it will be remembered, was organized in 1871, all of its stock being owned by the Philadelphia and Reading Railroad Company. In 1893 the railroad defaulted in the payment of its obligations. As these obligations had been secured by a mortgage on both the railroad and the coal property, the result was that both companies passed into receivers' hands. In 1896, in accordance with the decree of the Court, the property of both the railroad and the coal and iron company was foreclosed, and sold to Mr. C. H. Coster and Mr. F. L. Stetson, acting for the firm of J. P. Morgan and Company. They organized, under Pennsylvania laws, a new corporation, the Philadelphia and Reading Railway Company, to which they conveyed the railroad properties purchased by them, with the exception of the railway and marine equipment.¹ Shortly thereafter they reconveyed to the coal and iron company the coal lands and other property formerly belonging to it.² But through bankruptcy the Philadelphia and Reading Railroad had become divested of the shares of the coal and iron company. In the reorganization in 1896, it was necessary to accept the provisions of the Pennsylvania State Constitution of 1874, which made it illegal for the railway to hold coal lands. If the ownership of the railroad and of the coal properties were to be reunited, some device had to be invented wherewith to circumvent the constitutional prohibition. This was accomplished through the medium of a holding company, owning both the Philadelphia and Reading Railway Company and the Philadelphia and Reading Coal and Iron Company. The National Company, which had been incorporated in 1871 as the Excelsior Enterprise Company with very broad powers, including the power to buy and sell the shares and bonds of other corporations,³ was among the securities acquired in the purchase of the

¹ This equipment is still owned by the Reading Company.

² *Transcript of Record in Sherman Anti-Trust Case*, ii, *Agreed Statement*, pp. 607-608.

³ *Laws of Penn.*, 1871, no. 983. See also *Laws*, 1870, no. 949.

Philadelphia and Reading Railroad Company.¹ The name of the National Company was changed to the Reading Company, and its capital stock was increased from \$100,000 to \$140,000,000. To the Reading Company (that is, the old National Company under a new name) were transferred the stocks and bonds of the Philadelphia and Reading Railway Company, and of the Philadelphia and Reading Coal and Iron Company. These, with some additional property, were pledged by the Reading Company as security for \$135,000,000 of its own bonds, which, together with the certificates of beneficial interest in the shares of the Reading Company (these shares having been deposited in a voting trust), were distributed in accordance with the plan of reorganization. The payment of these bonds was guaranteed by the coal and iron company, as well as by the Reading Company.² The Philadelphia and Reading Railway could not sell its own bonds to the public, when desiring money for new construction or equipment (all the equipment used by it belonged to the Reading Company), but had to deliver its bonds to the Reading Company, which issued its own bonds, from the sale of which the needed capital was secured.³ Both the railway and the coal and iron company maintained their separate organization, but both were controlled absolutely by the Reading Company, which could, therefore, operate the two companies harmoniously.

The present situation (1913) is as follows: The Reading Company holds the entire capital stock of the Philadelphia and Reading Railway Company, and of the Philadelphia and Reading Coal and Iron Company. These three companies have the same president and the same treasurer, and have still other officers in common. Five of the six directors of the Reading Railway Company constitute five of the six directors of the Reading Coal and Iron Company, and all of the directors of both of these companies are on the directorate of the Reading Company, constituting in each case, in fact, two thirds of the directors of that company.⁴ The

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, *Agreed Statement*, p. 610.

² *Ibid.*, pp. 610-611.

³ *Mortgage of Phil. & Reading Ry. Co.*, Nov. 18, 1896, art. I, sec. 3, p. 15.

⁴ *Annual Report of the Reading Company*, 1913, p. 3.

general offices of the three companies are in the same building, and their annual reports showing the results of their combined operations are published in the same pamphlet. The Philadelphia and Reading Railway Company pays an annual dividend of 15 per cent, which goes, as a matter of course, to the Reading Company.¹ The Philadelphia and Reading Coal and Iron Company has never paid a dividend.² Indeed, it owes the Reading Company \$72,980,171,³ carried as an open account. Most of this represents advances which had been made by the Philadelphia and Reading Railroad Company prior to 1896, the debt of the mining company to the railroad company having been transferred in the reorganization to the Reading Company.⁴ Upon its enormous indebtedness the Philadelphia and Reading Coal and Iron Company has paid a varying rate of interest. Its president admitted in 1903 that "the rate of interest the Coal and Iron Company pays depends upon yearly earnings of the company and we have no agreement as to a fixed rate of interest."⁵ None whatever was paid prior to 1900, and in 1902 the coal company paid only $1\frac{1}{8}$ per cent which "was all we thought the Coal and Iron Company could afford to take out of its earnings that year and pay over to the Reading Company."⁶ In 1908 the coal company paid the Reading Company 2 per cent interest, which was as high a rate as it had ever paid up to that time,⁷ and higher than it has ever paid since, with the exception of the year 1913 when the rate was 3.1 per cent.⁸ Notwithstanding this low rate of interest the coal and iron company is frequently operated at a loss. The results of its operations for the last eight years are as follows:

¹ *Annual Report of the Reading Company*, 1913, p. 37.

² *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 190; and *Answer of the Philadelphia and Reading Coal and Iron Company*, p. 8 (see Biblio. no. 174).

³ *Annual Report of the Reading Company*, 1913, p. 51.

⁴ *Transcript of Record in Sherman Anti-Trust Case*, ii, pp. 190-191.

⁵ *Files of Interstate Commerce Commission in Hearst Case*, p. 556.

⁶ *Ibid.*

⁷ *Transcript of Record in Sherman Anti-Trust Case*, ii, pp. 190-191.

⁸ *Annual Report of the Reading Company*, 1913, p. 49.

1905-1906	Loss....	\$71,482	1909-1910	Loss...	\$71,500
1906-1907	Loss....	130,745	1910-1911	Loss...	103,316
1907-1908	Profit...	207,523	1911-1912	Profit..	171,575
1908-1909	Profit...	66,973	1912-1913	Profit..	1,139,592 ¹

With one exception the Reading Company has never received on the sum due it from the Reading Coal and Iron Company more than 2 per cent interest. If the coal and iron company were charged the market rate of interest, it would probably be conducted at a loss every year. These frequent deficits, which are borne by the Reading Company, are mainly due to the high freight rates charged by the Reading Railroad.² Any losses thus incurred by the coal company are counterbalanced by the large profits made by the railroad on the transportation of coal. Since both the coal company and the railroad are entirely owned by the Reading Company, it is immaterial to the Company whether its profits come from the mining of coal or from its transportation. Whether freight rates are high or low makes a great deal of difference, however, to the independent operators, and it would appear that the desire to bring about their elimination is the real explanation of such an adjustment of freight rates as results in the mining operations of the railroad coal companies being carried on at an apparent loss.

The Reading Company owns a majority of the stock of the Central Railroad of New Jersey, one of the most important anthracite carriers. The Central of New Jersey is interested in coal mining through the Lehigh and Wilkes-Barre Coal Company, producing in 1911 over 6 per cent of the total output. The Central Railroad owns \$8,491,150 of the \$9,212,500 capital stock of this company, or over 92 per cent of the total. Of this amount \$6,651,750 or 72 per cent was acquired on January 20, 1874,³ following the organization of the Lehigh and Wilkes-Barre Coal Company through the consolidation of the Honey Brook Coal Company and the Wilkes-Barre Coal and Iron Company, both of which prior to the consolidation had been controlled by the Central Railroad of New Jersey.⁴ The Central of New Jersey

¹ *Annual Reports of the Reading Company.*

² See ch. vi.

³ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 43.

⁴ *Transcript of Record in Commodity Clause Cases*, p. 7. See Biblio. no. 162.

and the Lehigh and Wilkes-Barre Coal Company have (1913) the same president, and he is the president also of the Reading Company. The railroad and the coal company have the same secretary and treasurer. Three of the seven directors of the coal company (five until recently) are directors both of the railroad and of the three Reading companies. The entire funded debt of the coal company, amounting to nearly \$17,000,000, is guaranteed by the railroad, both as to principal and interest; and in the past the latter has advanced to the former for the purposes of its business large sums of money, the payment of interest on which, when due, has frequently not been exacted.¹ Notwithstanding this exemption, the coal company paid no dividends until 1910.² Since that year regular dividends of four per cent have annually been paid. Of the stock of the coal company \$7,850,000 has been pledged by the railroad as part security for its bonded indebtedness.³ Though the Central of New Jersey does not own the entire capital stock of the Lehigh and Wilkes-Barre Coal Company, the practical identity of the two companies is nevertheless apparent.

The Central of New Jersey is closely affiliated with another concern, the Lehigh Coal and Navigation Company, mining in 1911, 5 per cent of the total output. The Central Railroad reaches the coal fields by the Lehigh and Susquehanna Railroad. This road, though owned by the Lehigh Coal and Navigation Company, has been leased since 1871 to the Central of New Jersey. By the terms of this lease the Coal and Navigation Company covenanted that the freight rates on coal and other commodities between points common to both the railroad and the canal should be arranged from time to time by the two parties to the lease, and should conform as nearly as possible to the rates then in effect on the railroads running between these common points. The Coal and Navigation Company also agreed to ship over the Lehigh and Susquehanna Railroad at least three-fourths of its output,

¹ *Original Petition in U. S. v. Reading Company*, p. 54. See Biblio. no. 173. Referred to hereafter as *Original Petition in Reading Case*.

² *Annual Report of the Central Railroad of New Jersey*, 1910, p. 17.

³ *Ibid.*, p. 15.

excepting the coal shipped over its own canal.¹ The Central of New Jersey may purchase that part of the output of the Coal and Navigation Company which the agreement does not require to be sent over the Lehigh and Susquehanna, provided it pays therefor a price which added to the proportion of the freight earnings on such coal accruing to the Coal and Navigation Company under the terms of the lease is not less than the Navigation Company could secure by shipping over other railroads.² The Central of New Jersey and the Lehigh Coal and Navigation Company have jointly purchased a majority of the capital stock of the Lehigh and Hudson River Railway, and they jointly guarantee the payment of a part of its funded debt.³ These two companies are likewise associated as practically the sole stockholders of two coal mining companies.⁴ Finally, two members of the board of managers of the Coal and Navigation Company are likewise directors of the Reading Company, which controls the Central of New Jersey. It is clear, then, that there exists between the Central of New Jersey and the Lehigh Coal and Navigation Company a close alliance and community of interest.

The relation of the Central of New Jersey to the Lehigh and Wilkes-Barre Coal Company is typical of the connection between the anthracite carriers and their subsidiary coal mining companies. The extent of stock ownership varies, however, in different cases. The Lehigh Valley Railroad, for example, owns all the stock (\$1,965,000) of the Lehigh Valley Coal Company, one of the largest coal mining companies. Most of this stock was acquired in November, 1875, and the remainder by February, 1908.⁵ The railroad and the coal company have (1913) the same president; and two of the six directors of the coal company are directors of the railroad, while a third is a vice-president of the railroad. The main offices of the two companies are in the same

¹ In 1912 only six per cent of the output of the Coal and Navigation Company moved to market over its canal. Practically all the coal mined by it, therefore, is subject to the restrictions of the lease. *Original Petition in Reading Case*, p. 54.

² *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 2.

³ See pp. 66-67.

⁴ *Original Petition in Reading Case*, p. 57.

⁵ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 57.

building, and up to 1908 the annual report of the coal company was treated as the report of a mere department of the railroad. The Lehigh Valley Coal Company has never paid a dividend;¹ in fact it has frequently borrowed large sums from the railroad. It was observed in the annual report of the Lehigh Valley Railroad for 1901 that "under the existing arrangements the Lehigh Valley Coal Company is compelled to depend upon the Railroad Company for working capital to carry on its operations,"² and during the year ending in November, 1901, one million dollars was advanced by the railroad to the coal company.³ Mr. Walter, formerly president of the Lehigh Valley Railroad, testified in 1904 that during his administration the coal company had always borrowed of the railroad when it wanted money.⁴ In 1905 the coal company borrowed large sums from the railroad, and in return gave its certificates of indebtedness in the amount of \$10,537,000. A part of these certificates were given in return for the stocks of some coal companies which were purchased from the railroad, and the remainder represented an exchange for some bonds of the coal company, which had been held by the railroad.⁵ It was not intended that any interest should be paid on these certificates, and up to 1912 none was paid. But in 1911 the Interstate Commerce Commission in the case of *Meeker and Company v. Lehigh Valley Railroad* held that the interest on these certificates, amounting at 5 per cent to \$526,850, constituted in all substantial respects a rebate to the Lehigh Valley Coal Company.⁶ As the result of this finding the coal company in March, 1912, paid up the arrearages of interest at the rate of 4 per cent, and canceled the certificates of indebtedness, payment being made partly in cash, and partly by a new issue of 4 per cent bonds, which were given to the railroad.⁷ In addition to its numerous advances, the railroad has guaranteed \$12,596,000 of the bonds

¹ *Transcript of Record in Sherman Anti-Trust Case*, v, p. 771.

² *Annual Report of the Lehigh Valley Railroad*, 1901, p. 25.

³ *Ibid.*

⁴ *Files of Interstate Commerce Commission in Hearst Case*, p. 2334.

⁵ *Transcript of Record in Sherman Anti-Trust Case*, v, p. 793.

⁶ *I. C. C. Reports*, xxi, p. 161.

⁷ *Annual Report of the Lehigh Valley Coal Company*, 1912, p. 7.

of the coal company, a large part of which likewise represent advances made by the railroad. The interest on these bonds is now paid by the coal company, but prior to 1904 had been paid, in some cases, by the railroad.¹ The capital stock of the Lehigh Valley Coal Company is part of the security for the general mortgage executed by the Lehigh Valley Railroad in 1903 under which mortgage there have been issued bonds to the amount of \$23,539,000.² Certain other considerations indicate the practical oneness of these companies. The Lehigh Valley Railroad has leased to the coal company expensive storage plants, trestles and coal yards at much less than their true rental value. The coal company has leased some of its coal lands to tenants upon the condition that their output be transported over the railroad.³ The Interstate Commerce Commission found in 1911 that the railroad, though not nominally a party to the percentage contracts, had nevertheless made a practice of settling for freight charges on the coal purchased and shipped by the coal company on the basis of the difference between the sum paid the coal operators and the average market price at tide-water.⁴

The identity of the railroad and the coal company has received judicial recognition. In the case of the Lehigh Valley Railroad Company *v.* Rainey, it was held of the relations of the railroad to the coal company that "the identity of interest between the two corporations was so plain that it seemed idle to question it."⁵ Judge Buffington held in 1910 that in work, profit, interest and official personnel the coal company was but an alter ego of the railroad itself.⁶ In speaking of the relation of the Lehigh Valley Railroad to the Lehigh Valley Coal Company the Supreme Court held that it was clear "that the facts averred tended to show an actual control by the Railroad Company over the property of the Coal Company and an actual interest in such property beyond the mere interest which the Railroad Company would have had as

¹ *Transcript of Record in Sherman Anti-Trust Case*, v, pp. 772, 778.

² *Transcript of Record in Commodity Clause Cases*, p. 19. See Biblio. no. 159.

³ *Bond Record*, May, 1896, p. 368.

⁴ *I. C. C. Reports*, xxi, p. 132.

⁵ 112 *Fed. Rep.* 487.

⁶ 183 *Fed. Rep.* 461. *Decision of Circuit Court*, December 8, 1910.

a holder of stock in the Coal Company.”¹ The fact that the railroad has been willing to lend money to the coal company without requiring the payment of any interest thereon would appear to show conclusively that the two are practically identical. Such a loan constitutes a rebate to the coal company on coal shipped over the railroad, and disposes of the contention of the railroads that the percentage contracts are in no way contracts fixing the freight rate to be charged by the railroad. It is true that they do not affect the rate paid in the first instance by the coal company, but if after having paid the regular rate the coal company suffers a loss, and if this loss is borne by the railroad, then the railroad is obviously receiving for the transportation of the coal a lesser sum than it receives from similar shipments by the independent operators.

The Lehigh Valley Railroad owns all the capital stock of Coxe Brothers and Company, and the business of the latter company is carried on by officers and directors, who are also officers and directors of the Lehigh Valley Coal Company. The entire output of Coxe Brothers is taken over at the mines by the Lehigh Valley Coal Company.² The Lehigh Valley Railroad owns, also, over 80 per cent of the stock of the New York and Middle Railroad and Coal Company.³ This company produces no coal, but leases a large part of its coal bearing lands to the Lehigh Valley Coal Company.⁴ Its president is the president of the Lehigh Valley Railroad, and a majority of its directors are directors or officers of the same road. The Lehigh Valley Railroad also owns a minority interest in the Highland Coal Company and in the Packer Coal Company, and is represented upon their directorates.⁵

The Erie Railroad owns almost the entire capital stock of the Pennsylvania Coal Company (\$5,000,000), acquired in 1901, and

¹ 220 U. S. 272. *Decision of Supreme Court in U. S. v. L. V. R. R. Co.*, April 3, 1911.

² *Original Petition in U. S. v. Lehigh Valley*, p. 30. See Biblio. no. 172. Referred to hereafter as *Original Petition in Lehigh Valley Case*. See also p. 86.

³ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 57.

⁴ *Ibid.*, Exh. 59.

⁵ *Transcript of Record in Commodity Clause Cases*, pp. 16-18. See Biblio. no. 159.

of the Hillside Coal and Iron Company (\$1,000,000), acquired in the reorganization of the Erie in 1895. The Pennsylvania Coal Company, in turn, owns the stock of several smaller mining companies. The officers of the Hillside Coal and Iron Company and of the Pennsylvania Coal Company, including the president, the vice-president, the secretary, and the treasurer, were the same in 1908 as those of the Erie Railroad, and a majority of the directors of each coal company were either directors or officers of the railroad.¹ At the present time (1913), however, the staff of officers of the Erie Railroad is no longer identical with that of its coal companies, and only one director of the Erie is on the directorate of the Hillside Coal and Iron Company, and only two are on the board of the Pennsylvania Coal Company.² The Hillside Coal and Iron Company has never paid a dividend;³ in fact, it has frequently been operated at a loss. The deficits of the coal company amounted to \$789,971 for the five years 1904-1908, and the money to make up these deficits was advanced by the railroad.⁴ Ordinarily no interest was paid on these advances, but as the interest fell due, it was added to the debt.⁵ The Pennsylvania Coal Company has long been a prosperous corporation, and has earned large dividends. These sums have been turned over to the Erie, though not in the form of a declared dividend.⁶ The Erie has pledged the shares of the Hillside Coal and Iron Company and of the Pennsylvania Coal Company under various mortgages executed by it.⁷ These ramifications clearly show the substantial identity of the Erie Railroad and its coal companies, the Hillside Coal and Iron Company and the Pennsylvania Coal Company.

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exhs. 80 and 81, and *Annual Report of the Erie Railroad*, 1908.

² *I. C. C. Investigation of Anthracite Rates*, xxxi. Answer of Erie Railroad to letters of February 9 and March 18, 1914.

³ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 431; and *I. C. C. Investigation of Anthracite Rates*, vii of answers to circular letter of December 23, 1912, (reply of Erie Railroad to question 21).

⁴ *I. C. C. Investigation of Anthracite Rates*, vii of answers to circular letter of December 23, 1912 (reply of Erie Railroad to question 21).

⁵ *Transcript of Record in Sherman Anti-Trust Case*, v, p. 1036. ⁶ *Ibid.*, ii, p. 182.

⁷ *Transcript of Record in Commodity Clause Cases*, p. 14. See Biblio. no. 161.

As has been seen the Erie Railroad, through the ownership of a large majority of its stock controls the New York, Susquehanna and Western Railroad. This company owns \$761,500, or over 61 per cent of the \$1,229,500 stock of the New York, Susquehanna and Western Coal Company.¹ The more important officers of the two companies are (1908) the same, and all of the directors of the coal company with one exception are directors of the railroad.² The New York, Susquehanna and Western Coal Company does not produce any coal, but it has purchased large quantities from the individual operators, which it marketed on its own account for several years after control over the railroad was secured by the Erie, but which it now sells at the mines to the Pennsylvania Coal Company for the same price as it paid therefor.³ The New York, Susquehanna and Western Coal Company consequently gains nothing by the original purchase of the coal, and obviously would not turn it over to the coal company of the Erie upon such terms, were it not recognized that for all practical purposes the two companies were one.

The Pennsylvania Railroad owns (1913) the entire capital stock (\$2,136,800) of the Susquehanna Coal Company. Of this amount \$1,000,000 was acquired on December 31, 1873, the day before the Constitution of 1874 went into effect, and the balance by August, 1888.⁴ The railroad has made a practice of lending money to the coal company for working capital. At the present time the railroad holds \$6,000,000 in certificates of indebtedness of the coal company, upon which 5 per cent interest is paid. The only security that the railroad has for the loan is the good faith of the coal company. This company was able to declare a 4 per cent dividend in 1912, but this was the first dividend payment since 1897.⁵ The Susquehanna Coal Company acquired on April 12, 1904, \$628,600, or 78 per cent of the \$800,000 capital

¹ *I. C. C. Investigation of Anthracite Rates*, xi and xii of answers to circular letter of December 23, 1912 (reply of railroad and coal company to questions 18 and 50 respectively).

² *Transcript of Record in Sherman Anti-Trust Case*, Exhs. 95 and 99.

³ *Ibid.*, ii, pp. 432, 435-436.

⁴ *Ibid.*, iii, Exh. 130. See also ii, p. 252.

⁵ *I. C. C. Investigation of Anthracite Rates*, iv, pp. 677-681, and xviii, p. 1395.

stock of the Lytle Coal Company,¹ which in 1910 was operated at a loss of over \$100,000.²

The Pennsylvania Railroad also owns a majority of the stock of the Northern Central Railway.³ The president and one of the vice-presidents of the Pennsylvania are the president and vice-president respectively of the Northern Central. These companies together own all the stock (\$300,000) of the Mineral Railroad and Mining Company, the Pennsylvania owning one-third, acquired in November, 1875, and the Northern Central two-thirds, acquired in April, 1865.⁴ The Mineral Railroad and Mining Company mines coal largely from land leased from the Northern Central Railway. The lease provides for a royalty of 28 cents per ton, but of recent years no royalty has been paid, for the reason that none has been earned. The vice-president of the mining company does not know what the accrued royalties would amount to, as the mining company keeps no record of it. The Northern Central Railway does not even render a bill. Every year, according to the testimony, the railway officials ask the mining company officials what the prospects are of receiving a royalty, but since 1906 the answer has invariably been that the mining company has no funds with which to make the payment. The product of the mining company is sold to the Susquehanna Coal Company, but the latter makes no profit on the transaction as it gives the mining company the proceeds of the sale, minus actual selling costs.⁵

The Pennsylvania Railroad also owns all the stock (\$25,000) ⁶ of the Summit Branch Mining Company. The railroad acquired its stock in this company in December, 1901, but it had for several years previously owned the stock of the Summit Branch Railroad Company, the predecessor of the Summit Branch

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 134. See also ii, p. 253.

² *Annual Report of the Pennsylvania Railroad*, 1910, p. 37.

³ *Ibid.*, 1913, p. 21.

⁴ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 252; iii, Exh. 131; and *Annual Report of the Pennsylvania Railroad*, 1913, p. 15.

⁵ *I. C. C. Investigation of Anthracite Rates*, iv, pp. 682, 686-688.

⁶ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 252; iii, Exh. 132; and *Annual Report of the Pennsylvania Railroad*, 1913, p. 14.

Mining Company.¹ The Summit Branch Mining Company is also operated at a loss every year, the Susquehanna Coal Company advancing the money to make up the deficit.² The Summit Branch Mining Company acquired in February, 1902, \$482,450, or nearly 98 per cent of the \$494,150 capital stock of the Lykens Valley Coal Company,³ a concern with a capitalization nineteen times as great as that of the purchasing company.

The Pennsylvania Railroad is thus seen to be interested in coal mining through the ownership of the entire capital stock of two companies engaged in the production of coal, both of which own a large majority of the stock of other companies, and also through the joint ownership with the Northern Central Railway of all the stock of still another coal company. The officers of these three coal companies are identical, and so are most of their directors,⁴ and until 1908, at least, a majority of the directors of these coal companies were also directors or officers of the Pennsylvania Railroad.⁵ The relationship, therefore, of the Pennsylvania Railroad to its coal companies is practically the same as is that of the other railroads to their coal companies.⁶

The New York, Ontario and Western Railway conducts mining operations through the Scranton Coal Company, and the Elk Hill Coal and Iron Company. The total capital stock of the former (\$200,000) was acquired by the Ontario in 1899.⁷ The president, and the secretary-treasurer of the Scranton Coal Company are (1913) the vice-president and secretary-treasurer respectively of the Ontario Railroad,⁸ as well as members of its

¹ *Transcript of Record in Commodity Clause Cases*, pp. 11-12. See Biblio. no. 158.

² *I. C. C. Investigation of Anthracite Rates*, iv, p. 689.

³ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 133. See also ii, p. 253.

⁴ *I. C. C. Investigation of Anthracite Rates*, xxxiii. Answer of Pennsylvania Railroad to letter of February 9, 1914.

⁵ *Transcript of Record in Commodity Clause Cases*, pp. 11-12. See Biblio. no. 158.

⁶ See in this connection Appendix, Letter VII. For the proposed sale by the Pennsylvania Railroad of its coal properties, see p. 210.

⁷ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 116.

⁸ *I. C. C. Investigation of Anthracite Rates*, xxxi. Answer of New York, Ontario and Western Railway to letters of February 9 and March 18, 1914.

board of directors. In pursuance of an agreement of February 1, 1899, the Ontario lent the Scranton Coal Company \$3,975,000 to enable it to purchase the Lackawanna Iron and Steel Company, possessing one of the largest and most valuable tracts of anthracite coal in the vicinity of Scranton. As security for the loan a mortgage was placed upon all the real estate acquired by the coal company, and the bonds were given to the railway. The Scranton Coal Company has been unable since 1907 to pay the interest on its second mortgage bonds, having been operated at a loss practically every year.¹ In return for this loan the Scranton Coal Company agreed to deliver to the railway all the coal mined from these properties, and to pay for the transportation thereof a certain percentage of the average price realized upon the sale of the coal.² The Scranton Coal Company, in turn, acquired in November, 1905, the entire capital stock (\$27,000) of the Black Diamond Coal Company.³

The entire capital stock (\$60,000) of the Elk Hill Coal and Iron Company was acquired by the Ontario in 1898. The directors and important officers of this coal company are the same as those of the Scranton Coal Company.⁴ The Ontario Railroad has made large loans to the Elk Hill Coal and Iron Company. By an agreement of November 30, 1900, the Ontario lent it \$5,000,000 to enable it to purchase and develop additional coal properties, and to pay portions of the debt incurred in previous purchases of coal lands. As in the agreement of the Scranton Coal Company, the property purchased was mortgaged to secure the debt, and the coal company agreed to deliver to the Ontario Railroad the total product of the mines acquired.⁵ Similarly the Elk Hill Coal and Iron Company for several years past has suffered a deficit, and since 1906 has paid no interest on its second mortgage bonds held by the railway.⁶ The Elk Hill Coal and Iron Company entered

¹ *I. C. C. Investigation of Anthracite Rates*, xxv, Morgan Exhs., nos. 32 and 34.

² *Files of Interstate Commerce Commission in Hearst Case*, Exh. 38.

³ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 117.

⁴ *I. C. C. Investigation of Anthracite Rates*, xxxi. Answer of New York, Ontario and Western Railway to letters of February 9 and March 18, 1914.

⁵ *Files of Interstate Commerce Commission in Hearst Case*, Exh. 37.

⁶ *I. C. C. Investigation of Anthracite Rates*, xxv, Morgan Exhs., no. 32, and xviii, p. 1097.

into an agreement with the Scranton Coal Company, under which the latter markets the total output of the Elk Hill Coal and Iron Company.¹ These advances to its coal companies were made by the Ontario Railroad to secure tonnage, and its chief traffic is the output of these subsidiary coal companies.

In marked contrast to most of the anthracite carriers, the Delaware, Lackawanna and Western Railroad owns its coal lands directly, and mines its own coal. With the exception of a part interest in the Temple Iron Company, it has no subsidiary coal mining companies. It does own the capital stock of two coal companies, the Lackawanna Valley Coal Company and the Glen Alden Coal Company, but neither of them produces any coal, and only one of them, the Glen Alden Coal Company, owns any coal lands, its holdings amounting to less than two acres.² The Lackawanna Railroad in the past has absorbed a number of coal companies, but these have always been merged with it, so that it now conducts mining operations directly through its own coal department.³ The railroad has been very profitable. Dividends have been paid regularly since 1880, and have averaged over 28 per cent per annum for the past ten years.⁴ There was also a stock dividend of 15 per cent in 1909, and stockholders were given the privilege in 1912 of subscribing at par for stock equal to 40 per cent of their holdings, the market price of the stock at the time being \$583.⁵ Inasmuch as some 40 per cent of the earnings of the railroad comes from the transportation of anthracite coal, it is evident that the business of mining and transporting coal, judging by the combined results of the two operations, is profitable, and that the failure of many coal companies to show a profit is due to the high freight rates charged by the railroad, which is thus credited with profits jointly earned by the railroad and its coal company.⁶

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 114.

² *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 580; and *Transcript of Record in Commodity Clause Cases*, p. 12 (see Biblio. no. 157).

³ For an account of the recent organization of a coal selling company, see p. 203.

⁴ *Annual Reports of the Lackawanna Railroad*; and *Poor's Manual*, 1913, p. 1394.

⁵ *Chron.*, 95: 1745 (1912).

⁶ In the case of the coal companies of the Reading, the Central of New Jersey,

The Delaware and Hudson Company, like the Lackawanna, mines coal from its own lands. It keeps an account in its books with the coal department, but this is, in the main, a mere book-keeping charge, as much the greater part of the coal shipped over the railroad is the product of its own mines.¹ The Delaware and Hudson, however, owns the stock of several companies owning coal lands and engaged in the production of coal. It holds the entire capital stock (\$1,500,000) of the Northern Coal and Iron Company, acquired in December, 1869. It acquired in March, 1901, all the stock (\$100,000) of the Hudson Coal Company, which in 1905 purchased the stock of the Schuylkill Coal and Iron Company (\$1000) and of the Shanferoke Coal Company (\$5000).² On account of the decision of the Supreme Court in the Commodity Clause case, the Delaware and Hudson arranged in 1909 to sell at the pit mouth its whole present and future output to the Hudson Coal Company.³ The Delaware and Hudson Company now conducts all the underground operations, even working the coal lands belonging to the Hudson Coal Company; and the Hudson Coal Company conducts all the operations above ground, preparing the coal and disposing of it in the market.⁴ Because of the increasing importance of the Hudson Coal Company, its stock has recently been increased to \$3,500,000. The officers and directors of the Hudson Coal Company, as well as of the other companies, are mainly drawn from those of the Delaware and Hudson Company.⁵ The Delaware and Hudson has been well managed, and has been prosperous. Dividends have been regularly paid since 1840. During this time six stock dividends aggregating 87 per cent have been distributed, and yet the rate of cash dividend has averaged nearly 7.5 per cent.⁶ And since and the Lehigh Valley, the interest charges on their enormous holdings of undeveloped coal lands explain, in part, the frequently recurring deficits.

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 169.

² *Ibid.*, iii, Exh. 123. ³ See p. 204.

⁴ *I. C. C. Investigation of Anthracite Rates*, xxxvi. Answer of Delaware and Hudson Company to letter of February 9, 1914.

⁵ *Ibid.*

⁶ *Annual Reports of the Delaware and Hudson Company*; and *Poor's Manual*, 1913, p. 1376.

1907 the rate of dividend has regularly been 9 per cent. This dividend record¹ confirms the conclusion reached in the case of the Lackawanna Railroad, that coal mining operations are profitable, but that the practical identity of railroad and coal company explains in many cases why the mining end of the business fails to register a profit.

Summarizing briefly, the railroads may be said to be engaged in coal mining, or at least interested in the mining of coal, in three different ways. The typical method is the ownership of all or a large part of the stock of one or more coal mining companies, — the method of the Central of New Jersey, the Lehigh Valley, the Erie, the Pennsylvania, the Ontario, and to some extent the Delaware and Hudson. The method of the Reading is somewhat different. The railroad does not own any of the stock of the coal company, but both the railroad and the coal company are owned by a holding company. In this way the same results are attained, without so obvious a connection between the business of transportation and mining. The Lackawanna, and to some extent the Delaware and Hudson, illustrate the third method, the direct conduct of mining operations by the railroad. Though our conclusions, therefore, require qualification, because of the different methods of control, it may be said in general that the railroads are either directly engaged in the mining of coal, or indirectly engaged through the ownership of stock in coal companies, which are for practical purposes part and parcel of the railroad. This conclusion seems justified, when there is borne in mind the ownership by the railroads of the stock of the coal companies, the officers and directors in common, the advances of the railroads to make up the deficits of the coal companies (largely the result of high freight rates), the advances to secure the tonnage of the coal company for the railroad, the willingness of the railroads to forego interest upon their loans, the joint publication of the annual reports, and, in the case of the railroads purchasing the Temple Iron Company, the fact that the railroads guaranteed

¹ Forty-seven per cent of the earnings of the Delaware and Hudson Company is derived from the transportation of coal, mainly anthracite.

the dividends of this company, but that the contracts for the purchase of the coal were made by the coal companies. This oneness of railroad and mining company ownership explains in turn why the railroad coal companies have been willing to continue to do business, notwithstanding in many cases a more or less regular annual deficit.

CHAPTER VI

THE TRANSPORTATION OF COAL

THE railroad coal companies, including the coal departments of the railroads mining coal directly, control over 90 per cent of the total output of anthracite coal. These companies, in turn, are controlled by the eight important anthracite carriers. It is proposed in the present chapter to consider the reasonableness of the freight rates charged by the anthracite carriers for the transportation of coal to market, and the extent to which these carriers are in a pool or combination to fix or maintain anthracite rates and to apportion the anthracite traffic.

The independent operators have long contended that the rates charged for the transportation of anthracite coal are unreasonable. The firm of Coxe Brothers and Company in October, 1888, had instituted suit before the Interstate Commerce Commission, charging that the freight rates of the Lehigh Valley Railroad on anthracite coal were unreasonable. The Lehigh Valley Railroad was then charging — for the prepared sizes — \$1.80 for the haul from the Lehigh region to Perth Amboy, New Jersey (its New York terminal). Several other anthracite carriers were charging the same rate, irrespective of the distance from the mines to tide-water. Shortly after the complaint the Lehigh Valley reduced its rate to \$1.70.¹ The Interstate Commerce Commission in its decision held that the evidence showed that the Lehigh Valley Coal Company had suffered a loss on many purchases of coal, and that this loss had been borne by the Lehigh Valley Railroad. The railroad, therefore, in fact, realized less than the established freight rates, which justified the conclusion that the freight rates to others were to some extent excessive.² The Commission decided that a reasonable rate was \$1.50 a ton, or 20 cents less than was then charged by the railroad, and 30 cents less than had been charged prior to the filing of the complaint. The Commission intimated

¹ *I. C. C. Reports*, iv, pp. 546-548.

² *Ibid.*, pp. 572, 574.

that \$1.50 might prove to be too high, in which case it would not hesitate to order further reductions.¹ This decision was not rendered until March, 1891. Meanwhile the case had dragged on so long that Coxe Brothers and Company constructed the Delaware, Susquehanna and Schuylkill Railroad to connect its mines with other anthracite carriers.

The rates charged at present for the transportation of anthracite are not as high as they were at the time of the Coxe Brothers' complaint. All of the eight more important anthracite roads, with the exception of the Delaware and Hudson,² reach tide-water at New York Harbor. Because of the importance of this harbor as a distributing center, the rates to the various harbor points may be taken as typical.³ The coal terminals of the Lackawanna, the Erie, the New York, Susquehanna and Western, and the New York, Ontario and Western are located at Hoboken, Weehawken, Edgewater, and Weehawken respectively, called the upper ports, and the terminals of the Central of New Jersey, the Philadelphia and Reading, the Lehigh Valley, and the Pennsylvania are located at Elizabethport (also Port Johnston),⁴ Port Reading, Perth Amboy, and South Amboy respectively, called the lower ports. As will appear from an examination of the table on page 134, the typical rate on the prepared sizes from the mines to these New York Harbor points, f. o. b. vessel, is \$1.60 per gross ton to the upper ports (\$1.58 on the Lackawanna), and \$1.55 to the lower ports. As this difference of about 5 cents a ton is made to equalize the cost of towing the coal to the wharves in New York City,⁵ the rate to this point is practically the same by each railroad, irrespective of the length of the haul.⁶ The group

¹ *I. C. C. Reports*, iv, p. 585.

² The Delaware and Hudson issues no interstate rates upon anthracite coal.

³ See p. 175.

⁴ The Central of New Jersey has terminals also at Port Liberty and Communipaw in the upper harbor.

⁵ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 122.

⁶ The average distance from the mines to tide-water ranges all the way from 123 miles by the Central of New Jersey to Elizabethport to 209 miles by the Ontario to Weehawken. Naturally the differences in the length of the haul from individual mines are even greater. *I. C. C. Investigation of Anthracite Rates*, xxviii, Respondent's Exhs., no. 3.

RATES PER LONG TON ON ANTHRACITE IN EFFECT, FEBRUARY 3, 1914, FROM ALL MINES ON THE RAILROADS NAMED TO PORTS ON NEW YORK HARBOR ¹

Port	Route	Prepared Sizes	Pea	Buck-wheat No. 1
f.o.b. Weehawken.....	Erie	\$1.60	\$1.45	\$1.30
f.o.b. Weehawken.....	N. Y. S. & W.	1.60	1.45	1.30
f.o.b. Weehawken.....	Ontario	1.60	1.45	1.30
f.o.b. Undercliff (Edgewater).....	Erie	1.60	1.45	1.30
f.o.b. Undercliff (Edgewater).....	N. Y. S. & W.	1.60	1.45	1.30
f.o.b. Hoboken.....	Lackawanna	1.58	1.43	1.28
(N.Y. Lighterage Sta.) except on coal mentioned below which takes the \$1.33, \$1.24, \$1.09 rates.				
f.o.b. Hoboken.....	Lackawanna	1.33	1.24	1.09
(N.Y. Lighterage Sta.) on coal from collieries and washeries on the Bloomsburg Branch at Scranton, So. Scranton, and Taylor, Pa., and on the main line, east of the Junction of the Bloomsburg Branch.				
f.o.b. Communipaw.....	Central of New Jersey	1.60	1.45	1.25
f.o.b. Port Liberty.....	Central of New Jersey	1.60	1.45	1.25
f.o.b. Port Johnston and Elizabethport.....	Central of New Jersey	1.55	1.40	1.20
f.o.b. Port Reading.....	Reading	1.55	1.40	1.25
f.o.b. Perth Amboy.....	Lehigh Valley	1.55	1.40	1.20
On coal originating in Lehigh and Schuylkill regions.				
f.o.b. Perth Amboy.....	Lehigh Valley	1.40	1.30	1.15
On coal originating in Wyoming region.				
f.o.b. South Amboy.....	Pennsylvania	1.40	1.25	1.15

system of rates applies, therefore, on the coal traffic from the anthracite region.

A few exceptions to the typical rate of \$1.55 to \$1.60 may be noted. The rate from the mines to South Amboy (New York Harbor) via the Pennsylvania Railroad is \$1.40 per gross ton on the prepared sizes. The principle upon which this rate was made was the same as in the case of the other anthracite carriers, namely, that the rate should represent a certain percentage of the selling price of coal. The Pennsylvania Railroad established its anthracite rates to tide-water in 1900, being the first of the carriers to publish rates to tide-water that were adhered to. Subsequent to the publication of this rate there came a strike in the

¹ I. C. C. *Investigation of Anthracite Rates*, xxviii, Respondent's Exhs., no. 2.

anthracite coal fields, which was followed by a rise in the price of coal. Each of the other anthracite carriers soon published rates to tide-water, which, like the Pennsylvania rate, represented a certain percentage of the selling price of coal, but the price having risen in the meantime, the rates put in force by the other roads were about 15 cents higher than the rate of the Pennsylvania. Subsequently the traffic officials of the Pennsylvania attempted to increase their rate to the level of that of the other lines, but the counsel for the railroad objected to the increase because of litigation then pending against the anthracite carriers, with the result that the rate has remained at its present figure.¹ There is in effect, also, a rate of \$1.40 per gross ton on the prepared sizes from the Wyoming region to tide-water via the Lehigh Valley Railroad, and a rate of \$1.33 from certain points on the Lackawanna Railroad. But these lower rates, as will be shown later,² resulted from an order of the Interstate Commerce Commission; and in no sense can they be regarded as typical, as only about one per cent of the total shipments in 1912 moved under these rates.³

The typical rate on the prepared sizes, therefore, is \$1.55 to \$1.60 per gross ton, and on pea coal it is \$1.40 to \$1.45, and on buckwheat No. 1, \$1.20 to \$1.30. The reasonableness of these rates might best be determined by a scientific calculation of the cost of transporting coal from the anthracite regions to New York Harbor. Fortunately such a computation has just been made by officials of the Interstate Commerce Commission. This body is now conducting, on its own motion, a most exhaustive inquiry into the rates and practices governing the transportation of anthracite coal, with a view to an order establishing reasonable anthracite rates. As a preliminary to this order the actual cost to the Central Railroad of New Jersey of transporting a ton of anthracite coal from the Wyoming and Lehigh regions to tide-water at Elizabethport and Port Johnston was determined for the month of November, 1912. It was found that the total

¹ *I. C. C. Investigation of Anthracite Rates*, iv, pp. 754-755, and xxxviii, pp. 3895-3902.

² See pp. 142-144.

³ *I. C. C. Investigation of Anthracite Rates*, xxviii, Respondent's Exhs., no. 5.

operating cost (including the cost of returning the empty cars to the mines) was 59.26734 cents per ton from the Wyoming region to tide-water; 44.35119 cents from the Lehigh region; and 49.03914 cents from the Upper Lehigh region.¹ For coal transported at such cost the Central of New Jersey charges freight rates varying as the size of the coal. On the prepared sizes the rate to Elizabethport and Port Johnston is \$1.55; on pea coal, \$1.40; on buckwheat No. 1, \$1.20, and on buckwheat No. 2, \$1.10. In order properly to compare rates and costs, the average freight rate for all sizes should be determined. If we give to the freight rate on each of these groups the weight to which each is entitled by virtue of the actual shipments,² we arrive at an average freight rate for the Central of New Jersey of \$1.40 per ton. The cost of carrying such coal to tide-water from the Wyoming region is less than 60 cents; from the Upper Lehigh region, less than 50 cents; and from the Lehigh region, less than 45 cents. On shipments from this last region, therefore, the freight rate exceeds by more than three times the actual operating cost. This cost, it should be clearly borne in mind, is merely operating cost. It does not include any return on the investment. Just how much per

¹ *I. C. C. Investigation of Anthracite Rates*, xxv, Morgan Exhs., no. 41.

² The Central of New Jersey was asked by the Interstate Commerce Commission to report the number of tons of the prepared sizes of coal, of pea coal, and of sizes smaller than pea, which were shipped over its line in November, 1912. By the aid of these figures the average freight rate has been determined. The table below shows the method of calculation:

	Shipments	Percent of Shipments	Freight Rate	Weighted Figures Using \$1.20 Rate for Smaller than Pea	Weighted Figures Using \$1.10 Rate for Smaller than Pea
Prepared sizes.....	490,349	59.76	× \$1.55	= \$92.628	\$92.628
Pea.....	83,937	10.23	× 1.40	= 14.322	14.322
Smaller than pea.....	246,263	30.01	× $\left\{ \begin{array}{l} 1.20 \\ 1.10 \end{array} \right.$	= 36.012	33.011
		100.00		100) \$142.962	100) \$139.961
Average freight rate.....				\$1.4296	\$1.3996

Approximately one-half of the sizes smaller than pea moved at a rate of \$1.20, the balance at about \$1.10. The average freight rate becomes \$1.43 or \$1.40 according to which of these rates is used, but in the text use has been made of the lower figure to guard against exaggerating the average freight rate.

I. C. C. Investigation of Anthracite Rates, i of answers to circular letter of December 23, 1912 (reply of Central of New Jersey to question 34).

ton should be added to the above figures as allowance for this factor remains to be determined by the Commission and the courts.

More recently the cost of transporting anthracite from the coal regions to Philadelphia has been determined, and this will serve to throw additional light upon the reasonableness of the anthracite rates in general. Of all the anthracite carriers, only two, the Philadelphia and Reading and the Pennsylvania Railroad, serve the City of Philadelphia. By a connection with other lines the Reading and the Pennsylvania reach the Lehigh district, and the Pennsylvania the Wyoming district also, but inasmuch as both of them have a direct line of their own from the Schuylkill district to Philadelphia, the rate from the Schuylkill region to Philadelphia, may be regarded as typical. This rate, for local delivery, is \$1.70 per gross ton for the prepared sizes, \$1.40 for pea, and \$1.25 for the sizes smaller than pea.¹ In 1912 a complaint was made to the Pennsylvania State Railroad Commission that these rates were too high, and the Commission was asked to order that the maximum rate for any size should not exceed 85 cents per ton.² In order that it might have a definite basis for its decision, the Commission in May, 1913, instructed the well-known accounting firm of Price, Waterhouse and Company to ascertain the cost to the Philadelphia and Reading Railway and the Pennsylvania Railroad of transporting coal from the respective mining districts to Philadelphia.³

This firm made its report in January, 1914. It found by employing approved accounting methods for allocating joint costs that during the twelve months ending May 31, 1913, it cost the Reading Railway 44.698 cents per ton to transport anthracite from the Schuylkill field to Philadelphia, and that it cost the Pennsylvania Railroad 61.043 cents by one route and 54.378 cents by another route.⁴ These costs, like those of the Central of New Jersey, are operating costs, and make no allowance

¹ *Files of the Pennsylvania State Railroad Commission*, i, pp. 13-14. See Biblio. no. 96.

² *Ibid.*, i, p. 16; iv, p. 1171.

³ *Report of Price, Waterhouse and Company*, p. 1.

⁴ *Ibid.*, p. 9.

for a return on the investment.¹ But they show that for the carriers generally there is little relation between the rates charged and the cost of doing the business. For the Philadelphia and Reading Railway, the leading anthracite carrier, the average freight rate to Philadelphia, calculated in the same manner as for the Central of New Jersey, is \$1.55.² The operating cost of carrying anthracite coal from the Schuylkill region to Philadelphia is less than 45 cents. In other words, the freight rate exceeds by more than three times the operating cost of transportation. An order establishing a new basis of rates to Philadelphia is at present under consideration by the Public Service Commission of Pennsylvania, a new board succeeding the former Pennsylvania State Railroad Commission, before which the complaint against the anthracite rates had originally been lodged.

Further light upon the reasonableness or unreasonableness of these rates may be thrown by a consideration of the earnings received for the transportation of anthracite, as compared with those received for the transportation of other freight, and by an analysis of the profits earned by the anthracite carriers. For this purpose the operations of the Lehigh Valley Railroad will be examined, as its freight rate (one of the lowest charged) has long been a bone of contention, and as a large part of its total traffic consists of anthracite coal. In the fiscal year 1913 the Lehigh Valley carried 14,732,949 gross tons of anthracite. Its gross earnings from the transportation of this coal were \$18,556,161, which was over 50 per cent of its gross freight receipts, and 43 per cent of its total operating revenue. Its gross earnings per net ton per mile from the carriage of anthracite coal were 7.11 mills, and from all other freight 5.67 mills, or 25 per cent greater

¹ *Report of Price, Waterhouse and Company*, p. 2.

² *I. C. C. Investigation of Anthracite Rates*, iii of answers to circular letter of December 23, 1912 (reply of Reading Railway to question 34).

	Shipments	Percent of Shipments	Freight Rate	Weighted Figures
Prepared sizes	746,772	62.24	× \$1.70	= \$105.808
Pea	183,597	15.30	× 1.40	= 21.426
Smaller than pea	269,449	22.46	× 1.25	= 28.075
		100.00		100) \$155.303
Average freight rate				\$1.55

for anthracite.¹ Were we to assume that the ratio of operating expenses to gross earnings was the same on anthracite as on all its traffic (67.62 per cent), the operating expenses chargeable against the transportation of anthracite would be \$12,547,676, and the net earnings \$6,008,485, or nearly 41 cents for each ton of anthracite hauled. But as it costs less per ton to move anthracite coal than general freight, the net earnings are even greater than this figure. Considering the large part that anthracite plays in the total receipts of the Lehigh Valley, it is clear that the rate charged for hard coal is highly remunerative. The profits of the Lehigh Valley, in recent years, have been great. No dividends at all were paid from 1894 to 1903, but in 1904 the road began to pay 10 per cent upon its preferred stock, a rate which it has since maintained, and 1 per cent upon its common stock. In 1905 the rate on the common stock was increased to 4 per cent, in 1907 to 6 per cent, and in 1911 to 10 per cent, a rate which is still paid, though in 1912, 10 per cent extra was given, making a total of 20 per cent. A large surplus, also, has been accumulated. The road had no surplus in 1902. By 1909 it had a surplus of 19.2 million dollars, in 1910 this surplus had risen to 27.2 million, and by 1911 to over 30 million. In 1912, largely because of the payment of the extra dividend of 10 per cent, the surplus declined to 23.4 million dollars, but increased in 1913 to 25 million.² The operations of the Lehigh Valley since 1904 have thus been highly profitable.

That the Lehigh Valley Railroad is not exceptional in its prosperity will become apparent from an examination of the table on the following page, showing the common stock dividends paid by the anthracite carriers since the development of the combination.

The actual earnings³ of the anthracite companies, however, are greater than the dividends declared. In the second table on the following page is shown the percentage earned in 1913 on the

¹ *I. C. C. Investigation of Anthracite Rates*, xxv, Morgan Exhs., nos. 36 and 38.

² *Annual Reports of the Lehigh Valley Railroad*.

³ The anthracite traffic, constituting, as it does, such a large part of the total traffic, must have contributed in large measure to this state of prosperity. The proportion of the total freight revenues of the important anthracite railroads which

COMMON STOCK DIVIDENDS PAID BY THE ANTHRACITE CARRIERS, 1898-1913¹

	Reading Company %	Central of New Jersey %	Lehigh Valley %	Lacka- wanna %	Delaware and Hudson %	Penn. R. R. %	Erie %	Ontario %	Lehigh Coal and Navigation Company %
1898	..	4	..	7	5	5	..	..	4
1899	..	4 $\frac{1}{2}$	..	7	5	5	..	..	4
1900	..	5	..	7	5	6	..	..	5 $\frac{1}{2}$
1901	..	5 $\frac{3}{4}$	..	7	7	6	..	..	6
1902	..	*	..	7	7	6	..	..	5 ¹
1903	..	12	..	7	7	6	..	..	6
1904	..	8	1	17	7	6	..	..	7 ¹
1905	3 $\frac{1}{2}$	8	4	20	7	6	..	4 $\frac{1}{2}$	8
1906	4	8	4	20	7	6 $\frac{1}{2}$	..	2	8
1907	4	8	6	20	9	7	..	2	8
1908	4	8	6	20	9	6	..	2	8 ¹
1909	4	8	6	85 ²	9	6	..	2	9
1910	6	12	6	20	9	6	..	2	8 ³
1911	6	12	10	55 ⁴	9	6	..	2	8
1912	6	12	20 ⁵	20	9	6	..	..	8
1913	8	12	10	20	9	6	..	2	8

* The Central of New Jersey paid regular quarterly dividends of 2 per cent in 1902, but none are shown because of a change in the date of the annual report.

¹ Not including a 10 per cent stock allotment at par.

² Including a 15 per cent stock dividend.

³ Not including a 10 per cent stock allotment at par, and a 15 per cent scrip dividend.

⁴ Including 35 per cent in guaranteed 4 per cent stock in Lackawanna Railroad of New Jersey.

⁵ Including a special dividend of 10 per cent.

common stock of these companies, after the payment of all expenses, including fixed charges, and preferred dividends, if any:

Reading Company.....	17.57 %	Pennsylvania.....	8.86 %
Central of New Jersey .	26.73	Erie.....	3.67
Lehigh Valley.....	16.90	Ontario.....	2.08
Lackawanna.....	32.04	Lehigh Coal and Naviga-	
Delaware and Hudson..	12.95	tion Company.....	8.93

The sums paid out in dividends, however, especially since the organization of a strong combination, and since the advance in the

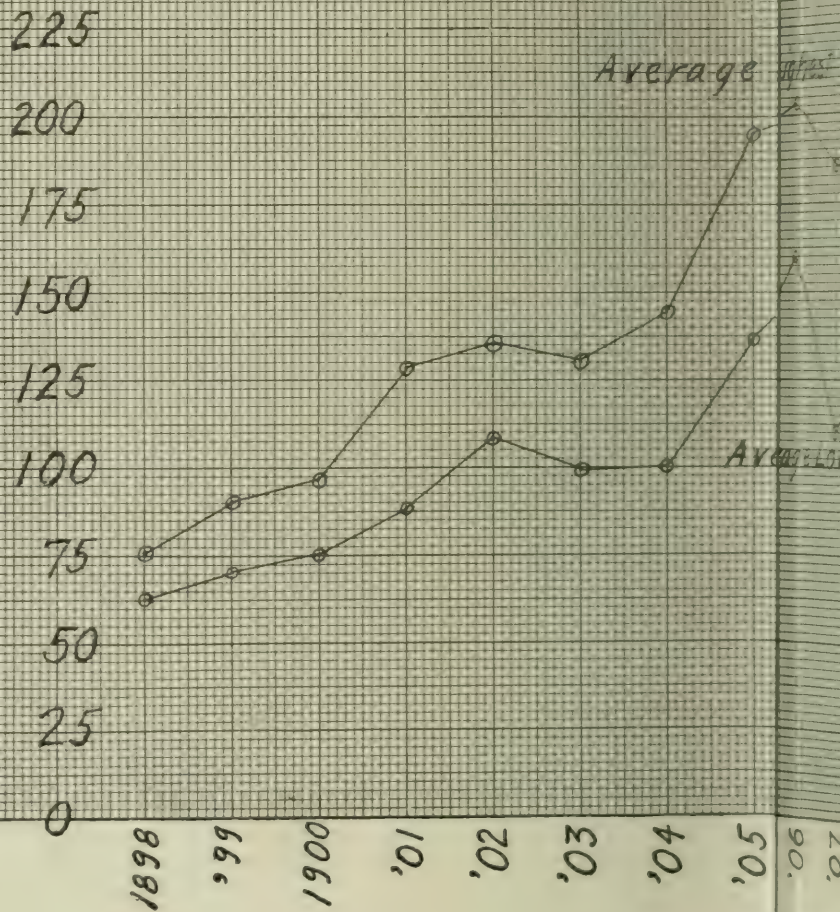
came in 1913 from the carriage of anthracite coal is indicated in the following table:—

Reading Railway (the main source of the Reading Com- pany's income).....	32.6 %	Lackawanna.....	49.8 %
Central of New Jersey.....	46.0	Delaware and Hudson.....	49.0
Lehigh Valley.....	50.5	Pennsylvania.....	6.4
		Erie.....	32.0
		Ontario.....	63.6

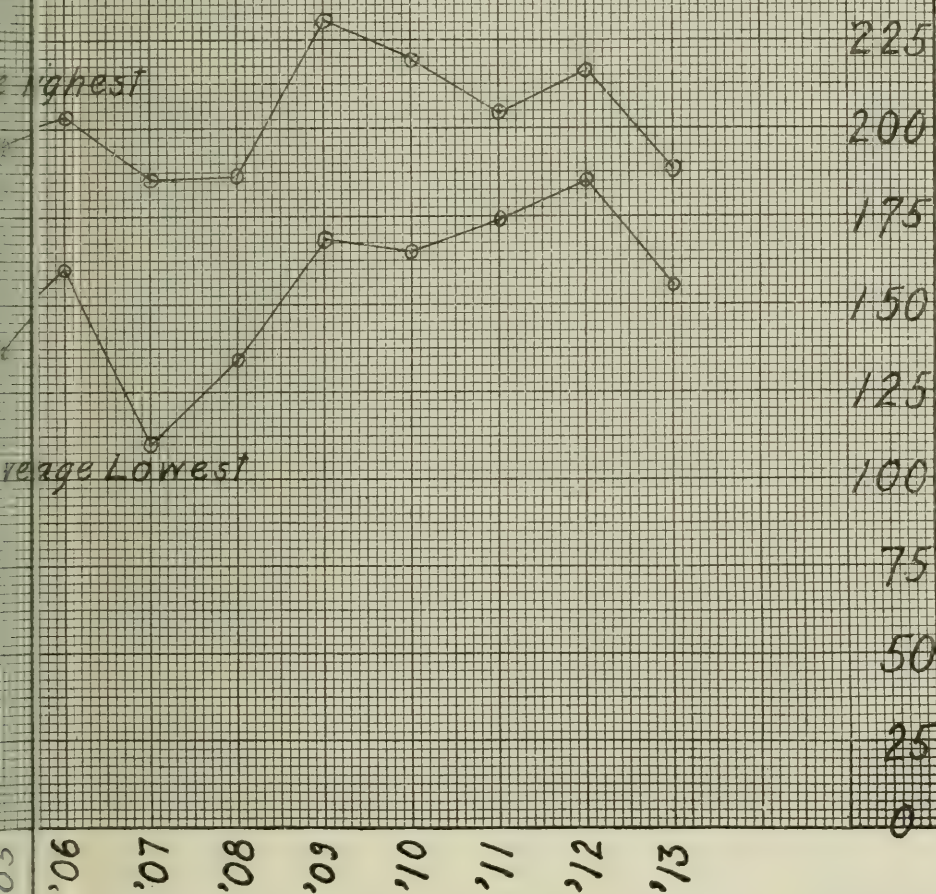
I. C. C. Investigation of Anthracite Rates, xxv, Morgan Exhs., no. 38.

¹ *Poor's Manual of Railroads*.

Average Highest
 QUOTATIONS of the
 of Eight Anthra
 1898-1913



Average Lowest
 COMMON STOCK
 of
 Railroad
 1913



price of coal as the result of the strike of 1902, sufficiently attest the large profits in the anthracite business.

That the anthracite business has become increasingly profitable since the organization of the combination is likewise demonstrated by the foregoing chart which shows graphically the average of the highest and the average of the lowest market quotations of the common stock of the eight important anthracite roads.¹ In 1898, the year when the beginnings in the development of the combination were made, the average of the highest prices at which the stocks of these roads sold was \$76, and the average of the lowest was \$63. From 1898 until 1909 there was an almost steady advance in the prices at which these securities were quoted. In 1909 the average of the highest quotations was \$231, and the average of the lowest was \$167. The high average in 1909 was partly in sympathy with the general high level of stocks in that year, and partly in anticipation of the payment of an 85 per cent dividend by the Lackawanna Railroad. The declaration of stock dividends by the Lackawanna and the Lehigh Coal and Navigation Company in 1909 explains a part of the decline in 1910 of the average of the highest market quotations, and likewise the drop in 1911 is partly explained by the privilege given in 1910 to stockholders of the Lehigh Valley to subscribe at par to \$20,000,000 of new stock worth \$125 per share at its lowest quotation. Notwithstanding these factors, the average of the lowest quotations increased almost steadily even up to 1912. In 1913 both the high and low averages suffered a considerable decline, but this was in sympathy, in the main, with the general drop in security values which has taken place since October, 1912. On the whole, therefore, it is clear that the formation of a combination, the maintenance of the freight rates at their high figure, and the frequent advances in the price of coal,² have made the anthracite business a particularly profitable one.

¹ These roads are the Reading Company (the stock of the Reading Railway, being held by the Reading Company, is not quoted on the exchange), the Central of New Jersey, the Lehigh Valley, the Lackawanna, the Delaware and Hudson, the Pennsylvania, the Erie, and the New York, Ontario and Western. For figures on which the chart is based, see Appendix, Table VII.

² See ch. 7.

The reasonableness or the unreasonableness of the freight rates charged has been passed upon by the Interstate Commerce Commission. In June, 1911, it rendered a decision in *Meeker and Company v. Lehigh Valley Railroad*. The firm of Meeker and Company was engaged in buying coal in the Wyoming region, in shipping it over the Lehigh Valley Railroad, and selling it in the New York market. The firm claimed that the rate to Perth Amboy (\$1.55) was unreasonable. The Lehigh Valley endeavored to show that the actual cost of transporting coal from the Wyoming region to Perth Amboy was \$1.49,¹ and that, therefore, a rate which left such a small margin for profit was not unreasonable. The exhibits as prepared by the Lehigh Valley Railroad showed that its average receipts per gross ton of anthracite coal transported to Perth Amboy in the ten years ending June 30, 1908, were \$1.46.² If the actual cost of transportation was \$1.49 per ton, the road must have been transporting coal at a loss, during the period when its surplus increased from nothing (in 1902) to \$19.2 million (in 1909). The estimate prepared by the railroad was shown, furthermore, to include certain items which were excluded by the Commission.³ For example, an allowance of 10 cents a ton had been made to offset the deficits of dividends in the years when none were paid by the railroad. The Commission held that this item ought to be eliminated on the ground that the shareholders of the Lehigh Valley had already received a fair return on their investment, if the money received in dividends, the increased value of the property, and the large unappropriated surplus of the railroad be taken into consideration.⁴ The cost of transporting anthracite coal from the Wyoming region to Perth Amboy, according to the railroad, after deducting the 10 cents which was not properly included, was \$1.39, and this, as the report of the Commission clearly showed, much exaggerated the actual cost. But the Lehigh Valley actually received for the

¹ *I. C. C. Reports*, xxi, p. 144.

² *Ibid.*, p. 147.

³ According to the Commission, there were many circumstances connected with the preparation of this estimate, which seriously impaired its value as evidence on the question of cost. *Ibid.*, p. 144.

⁴ *I. C. C. Reports*, xxi, pp. 155, 160-161.

transportation of the coal \$1.46 per ton. If, however, the free gift of the railroad to the coal company of the interest upon the certificates of indebtedness of the coal company held by the railroad be taken into account, a deduction of 5 cents a ton should be made in order to determine the amount for which the railroad was willing to transport the coal. Upon this showing the Commission decided that the rate of the Lehigh Valley on the prepared sizes was unreasonable in so far as it exceeded \$1.40, and a still lower rate was set for the smaller sizes.¹ The rate set by the Commission was 15 cents a ton less than was then being charged by the Lehigh Valley, the Central of New Jersey, and the Philadelphia and Reading upon shipments to New York Harbor points, 18 cents less than the rate of the Lackawanna, and 20 cents less than that of the Erie and the Ontario. In accordance with this order the Lehigh Valley on October 15, 1911, reduced its rates from the Wyoming region to Perth Amboy, but made no reduction in its rates from the other regions, although it had always, prior to that time, maintained identical rates from all three regions.² The other railroads have made no reductions in their rates, and continue to charge, in the main, the same rate that was declared unreasonable in the case of the Lehigh Valley. It would appear, then, that a lowering of the freight rate upon anthracite coal will be ordered in the near future.

Another case involving the reasonableness of the freight rates upon anthracite coal was decided by the Interstate Commerce Commission in June, 1912.³ The Marion Coal Company, engaged in the preparation and marketing of "washery" coal,⁴ complained that the freight rates of the Lackawanna were excessive. The rate from Taylor, Pennsylvania, where the plant of the Marion Coal Company was located, to Hoboken, New Jersey, was \$1.58 for the prepared sizes, and somewhat less for the smaller

¹ *I. C. C. Reports*, xxi, pp. 162-163.

² *Ibid.*, xxiv, pp. 145-146.

³ *Ibid.*, pp. 140-149.

⁴ "Washery" coal is small pieces of coal which were once discarded, but which are now being reclaimed from the culm banks. The Marion Coal Company, therefore, was especially interested in the rate upon the smaller sizes, but it is the findings of the Commission in regard to the larger sizes which is of most significance for our purposes.

sizes. The complainant claimed that any rate in excess of 95 cents for the prepared sizes was unreasonable. In rendering its decision, the Commission based its conclusions largely upon its findings in the Meeker case. A maximum rate had there been established, which yielded the Lehigh Valley ton-mile earnings of 8.48 mills for the transportation of anthracite. Upon this basis, the rate of the Lackawanna from Taylor to Hoboken would be approximately \$1.31. The commission held, however, that an allowance should be made for the fact that the distance from Taylor to Hoboken was shorter than the distance in the Meeker case. This would justify the use of a slightly higher ton-mile rate. It, therefore, established \$1.33 as a reasonable rate for the prepared sizes, and it set a somewhat lower rate for the smaller sizes.¹

The decision of the Interstate Commerce Commission in these two recent cases indicates that reductions will be made in the freight rate on anthracite coal. The setting of a lower rate for the shorter distance, though not a rate strictly proportional to the distance, may possibly indicate, further, that the practice of making the same rate to tide-water from each region, irrespective of the distance, is to be broken up.

However, the manner in which the anthracite coal business is conducted renders the freight rate of less importance than might at first appear. Nearly 80 per cent of the total production in 1911 was mined by the railroad coal companies. As they are for practical purposes owned by the carriers the freight rate is to them of little consequence. A high freight rate means that the profits of the railroad come from the transportation rather than from the mining of coal. A low freight rate, on the other hand, means that the profits are derived from mining rather than from transportation. But, as in either case the profits from both sources go into the coffers of the railroad, it is immaterial whether they be made on transportation or in mining. This assumes that the price of coal, being fixed by a combination (as will be shown in the following chapter), would be increased at the mines to the extent to which the freight rate was reduced, thus preventing any

¹ *I. C. C. Reports*, xxiv, p. 148.

reduction in the price at tide-water, or in the price to the consumer. Should, therefore, the Interstate Commerce Commission reduce still further the freight rate, the main effect would be to diminish the profit in transporting coal and correspondingly to increase the profit in mining. Furthermore, the amount of the freight rate has clearly been of no moment for that portion of the output of the individual operators which until 1912 was bound to the railroad coal companies under perpetual contracts,¹ as the operators were paid a certain percentage of the tide-water price, and changes in the freight rate did not affect the amount secured by them. The freight rate has been of importance mainly in respect to the coal sold to the railroad companies under short term contracts, and the coal marketed independently. A high freight rate reduces the profit in marketing coal independently, and in the past has offered a strong inducement to the independent operator to sell his coal under contract to the railroad or its coal company (and this is, no doubt, the *raison d'être* of the high freight rate). But even including the coal formerly sold under a perpetual contract, but now released by the order of the Supreme Court declaring these contracts illegal, only about 20 per cent of the output is affected by the freight rate, and this percentage is certain to become less and less,² regardless of whether the freight rate be high or low. The freight rate, however, will become of importance, should the present attempts on the part of the Government to divorce the business of transportation and mining meet with success.³ Inasmuch as very few of the railroad coal companies now return a surplus of earnings above expenditures, even with the present high price of coal, were these coal companies to become independent of the railroads, most of them, unless they could advance the price of coal still higher, would be compelled at the present anthracite freight rates to go out of business. In such a contingency the railroads to retain the anthracite traffic would undoubtedly reduce their rates to a figure which would permit of a profit in the mining operations. In this way

¹ See ch. 8. The Supreme Court in a recent decision (December, 1912) declared these perpetual contracts illegal.

² See p. 107.

³ See ch. 8.

practical demonstration of the unreasonableness of the existing rates would be given.

Attention may next be directed to the second phase of the topic, *viz.*, the extent to which the railroads are in a combination with respect to the transportation of coal. As has been seen, practically the same rate is charged by each railroad from the mines to its terminal at New York Harbor, notwithstanding considerable differences in the length of the haul. This, of course, is the natural tendency of railroad rates, but in this particular case a great deal of pressure has been exerted to prevent the anthracite rates from becoming uniformly lower. To cite one instance, late in 1906 the New York, Ontario and Western Railroad,—probably the most independent of the anthracite roads,—proposed to reduce its rate on the prepared sizes to Weehawken (New York Harbor) from \$1.60 to \$1.45, with corresponding reductions on the smaller sizes. This action was urged by the counsel of the railroad, who seems to have believed that the regularly recurring deficits in the operations of the coal companies, which were necessarily borne by the railroad, might be construed, under the recently enacted Hepburn Act, as a rebate to these subsidiary companies. A reduction in the freight rate to \$1.45 would apparently enable the coal companies to pay the full tariff rates, and leave a surplus, however small. The putting into effect of this new schedule of rates, however, would, according to the freight traffic manager of the Central of New Jersey, have led to similar reductions by the Erie and the Lackawanna, which in turn would naturally have involved the Central of New Jersey and the Lehigh Valley.¹ Mr. Baer, as president of the Reading Company and the Central of New Jersey, wrote to Mr. Fowler, president of the Ontario, protesting vigorously against the proposed reduction, and intimating that the filing of the lower rate would be followed by retaliatory measures.² Mr. Fowler, in his reply, reprinted herewith as an appendix,³ insisted that the action proposed was imperative, and gave it as his conviction

¹ *I. C. C. Investigation of Anthracite Rates*, xxv, Hickey Exhs., no. 5. Letter of T. B. Koons to W. G. Besler, October 16, 1906.

² See Appendix, Letter II.

³ See Appendix, Letter III.

that the division of the market price between the producer and transporter, as expressed in tariffs, needed readjustment at once. He declared that it was only good business policy to put each department, mining and transportation, on a self-supporting basis, instead of unduly swelling railroad earnings and making book assets of uncollectible advances to coal companies for the purpose of making up their deficiencies in income. But the pressure, banking and otherwise, which was soon brought to bear on him, proved too great, and after a personal conference with President Baer, he agreed to drop the proposed tariff making reductions to Weehawken.¹

This incident, fully substantiated by the actual correspondence, is by no means an isolated case. The records of the Interstate Commerce Commission abound with letters showing how, on numerous occasions, proposed reductions in rates have been prevented by the action of the other carriers. The Delaware and Hudson planned in 1907 to reduce anthracite rates to New England points by 20 to 40 cents per ton. This proposed action was thoroughly discussed in a meeting of the officials of the various anthracite roads,² and the Delaware and Hudson was induced to reduce these rates only 10 to 20 cents per ton. In 1908 the lines west of Buffalo were considering a reduction in the anthracite rates, but were dissuaded from this step by the presidents of the Reading and the Lackawanna Railroads. And since 1906 there have been no important reductions in the anthracite rates except those ordered by the Interstate Commerce Commission. The conclusion is inevitable that the anthracite rates are maintained at their present high level by the existence of a community of interest among the railroads sufficient to prevent marked reductions in the rates.

Further evidence of the existence of a pool in the transportation of anthracite to market is furnished in the fact that the proportion of the total shipments of anthracite coal carried by each railroad during recent years has remained approximately the same, as is shown by the following table:

¹ See Appendix, Letter IV.

² See Appendix, Letter V.

PROPORTION OF THE TOTAL ANTHRACITE TRAFFIC SHIPPED BY EACH OF THE INITIAL CARRIERS, FROM 1871 TO 1913¹

Road	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
P. & R.	33.95	28.70	27.65	27.65	24.26	26.65	32.86	29.04	28.47	25.28	24.35	24.04	23.34	21.62	21.24	20.84	21.81	18.81	20.13	20.97	21.26	19.55
C. R. R.	12.65	11.46	12.71	13.43	12.50	15.02	13.62	12.86	14.63	14.81	14.33	14.46	15.16	14.72	15.70	15.54	14.00	15.05	17.01	15.66	14.48	12.58
L. V.	18.35	19.58	19.42	19.81	16.67	21.55	21.35	19.33	16.85	18.75	20.07	20.38	19.70	19.32	19.31	19.24	16.70	17.28	18.37	18.88	17.85	16.58
Lackawanna .	11.02	12.81	13.91	11.68	14.37	10.80	10.03	12.39	14.80	15.15	15.40	15.93	16.00	16.94	15.77	16.09	17.97	18.34	15.54	16.16	15.32	15.59
D. & H.	12.45	14.65	12.87	11.37	14.42	9.78	8.58	11.62	11.53	11.45	11.26	11.00	11.10	10.95	10.44	10.83	11.69	11.76	10.77	10.25	9.74	9.69
Penn. R. R. .	5.81	5.94	7.16	8.15	8.99	8.78	7.35	7.74	6.43	7.95	7.78	8.01	8.70	10.32	10.73	10.83	11.01	11.04	10.97	11.21	12.35	13.30
Penn. Coal Co.	5.40	6.44	6.11	6.93	7.24	6.18	5.37	5.44	5.46	4.86	5.18	5.05	4.80	4.55	4.75	4.35	4.63	4.26	3.77	3.98	4.19	4.58
Erie.	35	42	17	98	1.54	1.24	.84	1.58	1.83	1.75	1.63	1.13	1.20	1.58	2.06	2.28	2.19	2.56	3.44	2.87	2.98	3.32
Ontario.																					1.72	1.93
D. S. S.11	2.88
Total.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Road	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	
P. & R.	19.35	20.03	21.29	20.89	20.16	19.62	20.32	20.70	20.48	18.94	19.36	19.83	20.48	20.21	20.89	19.45	19.24	19.17	18.96	20.21	18.70	
C. R. R.	12.77	11.72	11.48	11.58	11.36	11.04	13.37	11.77	11.50	11.63	12.47	12.53	13.00	12.54	12.99	13.14	12.81	13.13	13.18	13.11	13.16	
L. V.	15.40	15.52	15.82	15.63	15.43	16.44	15.92	15.32	15.51	14.84	16.40	16.72	16.40	15.33	17.18†	16.66	16.61	17.25	18.02	18.54	18.84	
Lackawanna .	15.98	14.49	13.18	13.03	13.67	13.83	11.31	13.33	14.06	16.51	16.13	16.23	15.56	16.52	15.25	15.60	15.38	14.77	14.11	14.25	14.34	
D. & H.	10.13	9.66	9.34	9.62	9.42	9.29	8.67	8.81	9.35	9.91	9.99	9.18	9.19	9.00	9.78	9.99	9.90	10.14	10.30	10.00	10.27	
Penn. R. R.	13.57	11.42	10.81	11.01	11.44	11.46	10.82	11.46	10.54	8.37	7.67	8.29	7.96	8.72	9.24	9.31	9.63	9.63	9.28	8.72	9.20	
Penn. Coal Co.	4.30	4.12	3.75	4.06	4.27	4.43	4.92	4.63														
Erie.	3.19	4.04	4.23	3.99	4.01	3.81	7.15†	6.82	10.91||	12.22	10.68	9.93	10.14	10.12	10.67	11.52	12.04	11.64	12.58	11.60	11.86	
Ontario.	2.69	3.31	3.06	3.06	3.90	3.27	3.97	3.68	4.68	5.22	4.54	4.60	4.66	4.39	4.00	4.33	4.39	4.27	3.57	3.48	3.63	
D. S. S.	2.53	3.94	4.02	3.93	3.18	3.71	3.55	3.48	2.97	2.36	2.76	2.69	2.61	2.57								
N.Y. S. & W.		1.75	3.02	3.22	3.16	3.10																
Total.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	

¹ Based on shipments to market. See Appendix, Table I.

† Includes N. Y. S. & W.

‡ Includes D. S. & S.

|| Includes Penn. Coal Co.

An examination of the table above reveals a marked stability in the percentages carried by each railroad during the past ten years. This stability is brought out even more clearly by the following table, which shows for six of the more important roads

	1871-1880	1881-1890	1891-1900	1901-1910
P. & R.....	2.15	1.33	.57	.57
C. R. R.....	.93	.65	.86	.44
L. V.....	1.21	.89	.58	.61
Lackawanna.....	1.51	.79	1.10	.60
D. & H.....	1.38	.36	.33	.30
Penn. R. R.....	.89	1.13	.68	.73
Sum of variations ..	8.07	5.15	4.12	3.25

the average yearly variation of the shipments of each road from its average proportional shipments for the four ten-year periods, 1871-1880, 1881-1890, 1891-1900 and 1901-1910.¹

It is evident that the constancy of the percentages varies considerably on the different roads. The proportion of the total shipments that was carried by the Reading fluctuated considerably from year to year during the periods, 1871-1880 and 1881-1890, but only about one-half of one per cent during the two periods, 1891-1900, and 1901-1910. The percentages of the Delaware and Hudson varied more widely during the first period, but only one-third of one per cent during the second period, and even less during the two succeeding periods. The Lackawanna and the Central of New Jersey both show a considerable degree of variation during the period 1871-1880, a lesser degree during the period 1881-1890, a greater variation during the period 1891-1900 (though less than during the first period), and still less variation during the period 1901-1910, the variation in this period being slightly less than one-half of one per cent in the case of the Central of New Jersey, and slightly above one-half of one per cent in the case of the Lackawanna. The proportion of the shipments carried by the Pennsylvania fluctuated less during

¹ The method of calculation is as follows: the anthracite shipments of the Philadelphia and Reading averaged 28.42 per cent of the total shipments of anthracite coal during the period, 1871-80. In 1871 the Reading carried 5.48 per cent in excess of this average; in 1872, .18 per cent in excess, and in 1873, .78 per cent less than its average. The sum of these annual variations, 1871-80, divided by ten, gives the Reading's average annual variation.

the first period than it did during the second period (this is the only railroad of which this was true), and less during the last period than during the two earlier periods, but the least variation of all was in the period 1891-1900.

Considering the sum of the variations of all the roads combined, the greatest deviation from the average proportional shipments was in the ten years, 1871-1880, a period of alternating agreements and severe competition. The variation was considerably less during the next ten years, 1881-1890, and still less in the following ten years, 1891-1900. During these twenty years agreements were being made and combinations formed, only to be dissolved shortly thereafter. Their dissolution, however, was not followed by such keen competition as prevailed during the earlier period, and the resulting variation was not, therefore, as great. The deviation from the normal was least of all during the ten years, 1901-1910, during which period the combination was effectively maintained (as it has been since).

Though there is doubtless no hard and fast rule for the apportionment of the anthracite traffic, the existence of an understanding among the railroads that they were each entitled to a certain percentage of the shipments is indicated by the fact that the proportion of the total shipments carried by each railroad has remained fairly steady, in spite of a considerable increase in the production. It should be noted that as the railroads, either directly or through their coal companies, control most of the anthracite tonnage originating on their lines, those changes in the proportionate shipments of each railroad which would normally arise as the result of keen competition for traffic, do not take place. Generally speaking, any increase in the anthracite traffic of the respective railroads must come from an increase in the output of its mines, or of the mines whose product is bound to it. There is, however, nothing to prevent a coal company from extending its operations and increasing its output through the construction of new plants or through an increase in the number of working days, unless it be the feeling among the railroad interests that each company is entitled to a certain percentage of the total shipments, and that any attempt by it to increase its

traffic will lead to similar action on the part of the other carriers, with a resulting demoralization of the business. The representatives of the railroads themselves have admitted that each road tries to conform in a general way to its proper proportion. The Industrial Commission in 1901 questioned Mr. Harris, a former president of the Reading Railroad, as follows: "Don't you recognize that you have a certain percentage of the market and that you are not to exceed that percentage so as not to encroach on the supply other roads take to market?"¹ Mr. Harris answered in the affirmative, but two years later he qualified this statement by testifying in the Hearst investigation that "it was a general understanding and never anything more."² In this same investigation Mr. Walter, formerly president of the Lehigh Valley, testified that during the years 1897 to 1902 there was an understood arrangement between the presidents of the different companies as to the proportion of the anthracite tonnage to be shipped over each of the railroads, and that, as president of the Lehigh Valley, he did his best to live up to that understanding.³ The railroads received from the Bureau of Anthracite Coal Statistics (an organization paid by the anthracite carriers to keep the records) reports of the shipments of each of the other roads and the tonnage which each road would have shipped had it adhered to the "presidents percentages," which were supposed to represent the mining capacity in 1896.⁴ This served to call to the attention of the carriers the extent to which the understanding was maintained, and to induce a closer correspondence between the railroads' proper proportion and its actual shipments.

The Temple Iron Company appears to have been the medium through which was maintained this understanding, which insured to each railroad its "normal" share of the total traffic. This company, it will be remembered, was the means in 1899 of defeating the construction of a proposed independent railroad.⁵ The presidents of the railroads which at that time guaranteed its debt, together with a few personal friends, were made its

¹ *Industrial Commission*, ix, p. 602.

² *Files of Interstate Commerce Commission in Hearst Case*, p. 1574.

³ *Ibid.*, pp. 2368-2369.

⁴ *Ibid.*, p. 2367.

⁵ See ch. 4.

directors. Since 1899 the presidents of the Reading Company, the Central of New Jersey, the Lehigh Valley, the Lackawanna, the Erie, and the New York, Susquehanna and Western have regularly been on the directorate of the Temple Iron Company, and at some portion of this period the presidents of every other railroad, except the Pennsylvania, have been among its directors.¹ With the exception of a short period from 1899 to 1900 Mr. Baer, the president of the Reading system, has been the president of the Temple Iron Company. The meetings of its board have been held, not at the office of the company but at the office of Mr. Baer, at 143 Liberty Street, New York. The board has generally met three times a year, but during the period of the coal strike in 1902 met somewhat oftener.² The convenience of the Temple Iron Company as a device for securing a harmonious management of the coal trade is apparent. During its early years at least, the presidents in conference discussed questions which were entirely apart from the proper business of the Temple Iron Company. At a meeting held June 27, 1899, "the proposition to establish a statistical bureau in New York for the purpose of keeping records of all matters of interest to the anthracite coal companies, the quantities to be mined each month, the prices, and so forth,"³ was considered and referred to a committee of three, which was to report on its practicability. At a meeting of June 27 of the following year, the board of directors ratified the appointment of an executive committee of the Temple Iron Company, which consisted of the vice-president and treasurer of the Temple Iron Company, the vice-president and general manager of the Philadelphia and Reading Coal and Iron Company, the general manager of the Lehigh Valley Coal Company, the vice-president of the Lackawanna Railroad, and the general manager of the Hillside Coal and Iron Company.⁴ Three of the members of this executive committee were not in any way connected with the Temple Iron Company, but were officers of the railroad coal companies. At a meeting of July 2, 1901, it was resolved that

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 354.

² *Ibid.*, pp. 336, 354.

³ *Ibid.*, ii, p. 345.

⁴ *Ibid.*, pp. 349-351.

there be "appointed a committee to consider the advisability and expediency of making a 40 per cent rate to outside shippers, or a flat rate, and, if so, what rate."¹ The members of this committee, as before, were operating officers of the railroads, or their coal companies, and not connected with the Temple Iron Company.² The Temple Iron Company at its meetings considered also the question of the differential, that is, the difference between the price of coal at the upper and lower ports,³ and the compensation to be paid to Mr. Ruley, who kept the records of the Bureau of Anthracite Coal Statistics. As Mr. Ruley was not in the employment of the Temple Iron Company, and as it had never made any payments to him,⁴ his compensation was clearly a matter entirely outside the proper business of this company. In fact, save the appointment of the executive committee, none of the matters mentioned were properly within its purview, and their consideration at the meetings of this company shows that the Temple Iron Company was used by the railroad presidents as a meeting place, where questions of policy could be freely discussed.⁵ As the Supreme Court of the United States observed, in ordering the dissolution of the Temple Iron Company in December, 1912, "its board of directors . . . supplies time, place and occasion for the expression of plans or combinations requiring or inviting concert of action."⁶

The minutes of the Temple Iron Company after 1901 do not disclose any significant items. The railroad presidents, however,

¹ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 346. The Secretary, Mr. Law, testified that outside shippers probably meant independent operators shipping their own coal, but he did not recollect the meeting.

² *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 370.

³ *Ibid.*, ii, p. 348. See *supra*, 133.

⁴ *Ibid.*, ii, pp. 348-349; also p. 492.

⁵ The president of the Temple Iron Company has asserted that the company has been run "as the most harmless mining company in the State of Pennsylvania," and has had nothing to do with the price of coal or with rates for transportation. The Supreme Court of the United States held, however, that "this disclaimer of power does not detract from the significance of the minutes of the Board referred to as evidence bearing upon the question of the relation of the several defendants to each other." The Supreme Court declared that the railroads had combined through the Temple Iron Company in violation of the Sherman Act. 226 U. S. 354-355.

⁶ 226 U. S. 353.

continued to meet through this company, and here in all probability the necessity for harmonious action was brought out, and the "normal share" of each railroad determined upon. A meeting of the railroad officials of these six roads would be insufficient, of course, were there not some measure of common interest between them. The existence and ramifications of this community of interest have already been shown for 1902-1903.¹ Though it may be (owing possibly to fear of Governmental interference) that the inter-ownership of stock has since become somewhat less, the common representation on the directorates of different railroads is still equally as great. In 1903 there were eleven individuals represented on the directorates of two or more anthracite railroads, and in 1913 twelve individuals. In both years these individuals represented thirty-one of the total number of directors. The situation in 1913 is shown by the following table.²

INTERLOCKING DIRECTORATES, 1913

Individuals	P. & R.	C. R. R.	L. V.	Lacka.	D. & H.	Erie	Penn.	Ont.
A	+	+	+	+	..	+		
B	+	+	+					
C	+	+	+					
D	+	+	
E	+	+	+		
F	+	..	+				
G	+	+				
H	+	+
I	+	+		
J	+	+	..	+
K	+	+		
L	+	+

The table reveals a considerable degree of community of interest, especially for the five railroads which were combined in the Temple Iron Company project, one individual, indeed, being on the directorate of each of these roads. These five roads in 1913 carried nearly 77 per cent of the total shipments. The Pennsyl-

¹ See pp. 67-73.

² Poor's *Manual of Railroads*, 1914. Influenced by public sentiment, and possibly by impending legislation to prohibit interlocking directorates, certain members of the firm of J. P. Morgan and Company resigned early in 1914 as directors of some of the anthracite railroads.

vania, also, owns indirectly a large amount of stock in several of the anthracite coal roads, and works in harmony, as does the Delaware and Hudson, with these five anthracite carriers. The most independent line is the Ontario, shipping only 3.6 per cent of the total shipments. The New York Central recently attempted to secure control of this road, but its purchase (from the New Haven) was forbidden by the New York Public Service Commission.

Summarizing briefly, an analysis of the cost of transporting anthracite coal and of the profits earned by the anthracite carriers, and a review of the orders of the Interstate Commerce Commission, lead to the conclusion that the freight rate on anthracite is unduly high. The maintenance of the present level of freight rates is evidence of the existence of an effective coöperation among the carriers. It is significant, also, that though the anthracite shipments have increased very rapidly in the last fifteen years, the percentage carried by each railroad has remained fairly constant. This fact becomes more noteworthy during such years as 1902, when the shipments declined by one-half. The maintenance of this steadiness has presumably been facilitated by the Temple Iron Company, upon whose directorate the more important railroads have been represented, and is strengthened by a community of interest among the railroads, which has made it possible for the Temple Iron Company to be dissolved by judicial decree without any resultant disturbance in the harmonious conduct of the business.

CHAPTER VII

THE PRICE AND SALE OF COAL

THE control of the output of anthracite coal by the railroads, and the harmonious relations between these railroads in respect to the transportation of this coal to market have, it is believed, been sufficiently established. The established facts indicate a tacit yet effective combination. Still further evidence of the existence of a combination is furnished by the statistics of prices. The combination has influenced the price of coal in two ways: first, it has effected a considerable increase; second, it has steadied the price to a noteworthy degree.

The course of prices from 1890-1913 (embracing periods of competition and of combination) is shown in the following table:

AVERAGE MONTHLY SELLING PRICE OF STOVE COAL (WHOLESALE), F.O.B.
VESSEL, NEW YORK HARBOR, 1890 TO 1913, IN LONG TONS¹

Year	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901
Jan.	\$3.86	\$4.11	\$3.72	\$4.58	\$4.16	\$3.46	\$3.29	\$3.99	\$3.73	\$3.56	\$4.05	\$4.45
Feb.	3.75	3.99	3.56	4.56	4.03	3.48	3.44	3.99	3.87	3.54	4.01	4.60
March	3.59	3.80	3.71	4.07	3.85	3.31	3.56	4.06	3.89	3.52	3.86	4.45
April	3.58	3.67	3.80	3.95	3.57	3.11	3.57	4.06	3.90	3.56	3.72	3.95
May	3.52	3.67	3.88	3.90	3.50	3.09	3.57	4.05	3.95	3.63	3.72	4.03
June	3.54	3.71	4.06	3.91	3.54	3.01	3.73	4.06	3.92	3.65	3.67	4.14
July	3.59	3.71	4.17	4.12	3.55	2.94	3.88	4.06	3.91	3.67	3.67	4.24
August	3.62	3.74	4.42	4.29	3.58	2.89	4.05	4.06	3.83	3.68	3.67	4.33
Sept.	3.76	3.80	4.60	4.23	3.33	2.93	4.06	4.06	3.73	3.80	3.86	4.44
Oct.	3.79	4.00	4.67	4.26	3.28	3.01	4.09	4.06	3.66	3.91	4.35	4.45
Nov.	3.94	4.05	4.63	4.24	3.40	3.08	4.22	3.94	3.62	3.95	4.42	4.45
Dec.	3.99	4.00	4.62	4.20	3.40	3.19	4.08	3.77	3.57	3.98	4.34	4.45
Average	3.71	3.85	4.15	4.19	3.60	3.13	3.79	4.01	3.80	3.70	3.94	4.32

¹ *Bulletins of Bureau of Labor.* Stove coal is typical of the prepared or domestic sizes, which constitute about 60 per cent of the total shipments, or including pea coal, which is being used more and more for domestic purposes, over 70 per cent of the total. The figures are for a free burning white ash, the standard grade. The special grades of hard white ash and red ash sell at somewhat higher prices. Where the Bureau's quotations give fractions of a cent, the nearest figure has been used. Thus, \$4.7469 is given as \$4.75.

AVERAGE MONTHLY SELLING PRICE OF STOVE COAL (WHOLESALE), F.O.B.
VESSEL, NEW YORK HARBOR, 1890 TO 1913, IN LONG TONS (*continued*)

Year	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Jan.	\$4.45	\$4.95	\$4.96	\$4.95	\$4.94	\$4.95	\$4.95	\$4.95	\$4.95	\$4.95	\$4.95	\$5.20
Feb.	4.45	4.95	4.96	4.96	4.94	4.95	4.95	4.95	4.95	4.95	4.95	5.19
March	4.46	4.95	4.95	4.95	4.94	4.95	4.95	4.95	4.95	4.95	4.95	5.20
April	3.95	4.45	4.45	4.45	4.95	4.45	4.45	4.45	4.45	4.45	4.95	4.70
May	4.02	4.55	4.54	4.54	4.54	4.53	4.53	4.54	4.53	4.53	4.90	4.78
June	...	4.64	4.64	4.63	4.63	4.64	4.64	4.63	4.63	4.60	4.89	4.88
July	...	4.75	4.75	4.74	4.74	4.74	4.75	4.74	4.72	4.69	4.97	4.96
August	...	4.85	4.85	4.85	4.84	4.84	4.85	4.83	4.85	4.82	5.08	5.07
Sept.	...	4.95	4.94	4.95	4.95	4.94	4.94	4.94	4.93	4.90	5.18	5.17
Oct.	...	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	5.19	5.20
Nov.	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.94	5.20	5.20
Dec.	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	4.95	5.20	5.19
Average	4.46	4.82	4.82	4.82	4.85	4.82	4.82	4.82	4.82	4.81	5.03	5.06

The first fact to be noticed is the rise in price since the autumn months of 1900. As the result of the strike, which began in the middle of September, the price of stove coal rose in October to \$4.35, the price in October of the previous year having been \$3.91. During only one period in the preceding ten years had the price been so high, and this high price was due to the combination under the leadership of the Reading in 1892 and 1893. But with the failure of the Reading's attempt at consolidation in 1893, the price fell again, the average for the year 1894 being \$3.60. The advance of 1900, however, has been maintained. By January, 1901, the price had risen to \$4.45, and by the following month to \$4.60, falling off again in March to \$4.45. In April, 1901, it fell to \$3.95, — this low price was due to the introduction of the regular discount of 50 cents in April, which, with few exceptions, has been adhered to ever since. In accordance with the discount plan the price was increased approximately 10 cents a month until September, when the level of \$4.45 was again reached. In May, 1902, occurred the greatest strike the anthracite region has ever known. At the close of the strike in the latter part of October, the price had reached \$4.95, a figure, which, with the exception of the discount in the summer, was regularly maintained until 1912 (when an additional charge of 25 cents per ton was imposed).

This advance in price of at least \$1 a ton over the level previously prevailing is an indication of the existence of a combination. The mere fact of such an advance is not conclusive evidence, however, as there have been other factors which have tended to bring about this result. The cost of mining has greatly increased, and especially the labor cost, on account of the higher wages granted in 1900 and 1902. It is a difficult matter to make a wholly satisfactory estimate of the extent to which the higher price merely offsets an increase in the cost of mining, as this cost varies so much for the different companies, and in the different mines of the same company, and because of the difficulty of allocating to any one size, such as stove coal, for example, those elements in the expenses of mining which are properly chargeable to this one size, — inasmuch as all sizes are produced together under joint cost. But among the few reliable figures obtainable are those showing, for the years 1900 to 1903, the average price received at tide-water by the Delaware and Hudson Company for all sizes of coal, the total cost of mining, and the labor cost.¹

	Price Received	Payrolls other than Office	Cost of Mining ²
1900.....	\$3.20	\$1.16	\$1.43
1901.....	3.57	1.24	1.54
1902.....	3.87	1.46	1.93
1903.....	4.10	1.53	1.96

Between 1900 and 1903 the price received for coal by the Delaware and Hudson increased 90 cents per ton. The labor cost of mining, however, increased only 37 cents per ton, and the total mining cost only 53 cents per ton. Upon this showing it may be concluded that the considerable advance in price between 1900 and 1903 can be explained only in part by the increased cost of mining, the main factor in which has been the higher wages paid the miners on account of the strikes of 1900 and 1902.

The prices received³ by the Philadelphia and Reading Coal and Iron Company, and the mining costs⁴ (including wages,

¹ *Files of Interstate Commerce Commission in Hearst Case*, Exh. 148.

² Exclusive of general expenses of administration and sinking funds.

³ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 707.

⁴ *Ibid.*, iv, p. 697.

supplies, improvements, and general expenses) are shown below for the years 1899-1903.

	Prices Received	Mining Costs
1899.....	\$1.84	\$1.59
1900.....	1.94	1.67
1901.....	2.21	1.83
1902.....	2.32	2.07
1903.....	2.63	2.20

The cost of mining for all sizes, therefore, was 61 cents greater in 1903 than in 1899. At the same time the average price received at the mines was 79 cents greater in 1903 than in 1899. In the case of the Reading Coal and Iron Company, therefore, only a part of the rise in price is to be explained by the increased cost of mining.

The report of the Lackawanna Railroad for 1903 showed a net profit on the sale of coal of over 3 million dollars. This was 85 per cent greater than its profit in 1901. When asked, before the Interstate Commerce Commission, whether he attributed "that gain of 85 per cent in profit very largely to the excess of the new price over the increased cost of mining,"¹ President Truesdale answered, "That had considerable to do with it, of course."²

Thus, though it is not possible to arrive at a figure which definitely shows for all the companies the increase in the cost of mining (which may be compared with the increase in price), yet there would appear to be no doubt, on the basis of the available evidence, that the price was increased beyond the higher cost of mining. It appears that the cost of the strikes of 1900 and 1902 has been borne by the consumer — with some additional charge, which has made the production of coal more profitable to the companies than before.

It can hardly be maintained that the rise in the price of anthracite was but a reflex of the rise in all prices. It is true that anthracite coal has risen in price since 1899, the year preceding the strike of 1900, with its resulting advance in prices, by about the same amount as have all commodities. The rela-

¹ *Files of Interstate Commerce Commission in Hearst Case*, pp. 2453-2454.

² *Ibid.*

tive price for anthracite as computed by the Bureau of Labor was 97.6 in 1899 and 126.7 in 1911, an increase of 29.8 per cent, while the relative price of all commodities showed an increase of 27.1 per cent. The increase in the price of hard coal, however, was brought about rapidly. The relative price of anthracite rose from 97.6 in 1899 to 104.0 in 1900, to 113.9 in 1901, to 117.6 in 1902 and to 127.1 in 1903. After 1903 and up to 1912 there was practically no change. On the other hand the relative price for all commodities rose from 101.7 in 1899 to 110.5 in 1900, declined in 1901, and in 1903 was only 113.6. The greatest increase in the price of all commodities, showing the rise in general prices in the United States, has come since 1904, and especially since 1905, yet save for the recent advance in 1912, there has been no significant change in the price of anthracite since 1903.¹ The fact that anthracite had not risen in price during these years, whereas so many other staple commodities had risen, constituted for the president of the Lackawanna Railroad one of the "numerous sound and convincing reasons why this prime necessity of life should remain in the control of the comparatively few hands where it now is."² Comparing the price of anthracite with that of bituminous, the price of soft coal (Georges Creek) increased but slightly from 1899 to 1901, rapidly from 1901 to 1903, in fact even more rapidly than did the price of anthracite, but since 1903 the decline in the price of bituminous has been great, the price in 1911 just about reaching the level of 1900 and 1901.³

The existence of a combination, however, is shown, not so much by the mere fact of a considerable rise in the years 1900 and 1902, as by the mode in which this rise was brought about. The advance in 1902 was made in October, the various companies putting out a uniform schedule of monthly prices for the prepared sizes of coal, averaging about 50 cents higher than the previous prices. The schedule for stove, egg, and chestnut was \$5 per ton at the terminal points nearest the city of New York,

¹ *Bulletin of Bureau of Labor*, April, 1913.

² *Annual Report of the Lackawanna Railroad*, 1907, p. 11.

³ Bituminous coal from Georges Creek, at New York Harbor. *Bulletin of Bureau of Labor*, March, 1912.

and 5 cents less at the terminal points farther away.¹ These uniform advances in the price of coal were put out at the same time, after consultations among the presidents of the railroads, or their coal companies, each of whom was aware of the price which the other companies were to charge. President Truesdale of the Lackawanna testified in 1908 that the advance in the circular price of the Lackawanna in 1902 was made by the officers of the coal sales department of the railroad after consultation with him. His answers to the questions of the examiner are as follows:

Q. Did you not know that the other railroads were all going to have the same price? — A. I think I had general knowledge of that. . . . — Q. How did you get that general knowledge? — A. I do not know. There are various ways of getting it. — Q. You knew what the Reading was going to do? — A. I think we did. — Q. And the Reading knew what you were going to do? — A. Yes, sir. . . . — Q. Everybody put out the same price at the same time? — A. They did; yes, sir.²

President Thomas, when asked with whom he consulted in the fixing of the price in 1902, replied, "I do not recollect now. I think probably I consulted with Mr. Baer; very likely I asked Mr. Truesdale what he was going to do. I know I asked Mr. Walter what he was going to charge for coal."³ It is significant that this considerable advance in the price of the prepared sizes of anthracite, made by the presidents after consultation, remained in force until 1912, with the exception of the omission of the April discount in 1906 on account of the suspension of mining operations in April of that year.

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exhs. 172, 177, 178, 179, 180. This new schedule applied only to the prepared sizes. The smaller sizes, which are used principally for steam purposes, are sold in competition with bituminous, and therefore no attempt was made to fix a uniform price for them. They are generally sold, also, under contracts running for a year, and the discount, therefore, was not necessary, as it was in the case of the prepared sizes. The broken or grate size is also sold in competition with bituminous, principally under yearly contracts, and thus though listed in the price schedules is not governed by them in practice. (See *Transcript of Record in Sherman Anti-Trust Case*, iv, pp. 605-606, and v, p. 1125).

² *Transcript of Record in Sherman Anti-Trust Case*, v, pp. 1145, 1147.

³ *Ibid.*, p. 1113. In 1902 Mr. Thomas was chairman of the board of directors of the Lehigh Valley Railroad, and Mr. Walter was president. In November, 1902, Mr. Walter resigned, and Mr. Thomas has since been president.

In 1912 the combination made another advance in the price of coal. This advance, as in 1900 and 1902, was associated with labor difficulties. On the 31st of March, 1912, the three-year agreement between the operators and miners came to an end. The miners, as usual, had presented demands for higher wages and improved conditions, and the operators had refused to accede to these demands. On the 1st of April, therefore, operations were suspended. After seven weeks of comparative idleness a compromise was effected, and operations were resumed on May 20th. The new agreement was to remain in force until March 31st, 1916 — a four-year period instead of the usual three-year period. The miners secured a 10 per cent increase in wages, but the abolition by 'mutual consent' of the sliding scale arrangement reduced their net increase to 5.6 per cent.¹ To meet the advance in wages, and to compensate for rising mining costs the operators advanced the wholesale price of the prepared sizes 25 cents a ton. An advance of 25 cents a ton on chestnut had already taken place, being imposed by some companies in November, 1910; by others in April, 1911.² This action had been taken in order to equalize the demand, which for this size had become in excess of the supply. In 1912 the price of the remaining prepared sizes was increased by 25 cents, and, in addition, there was a further advance of 25 cents on chestnut. The circulars announcing these higher prices (issued under date of June 1) were so substantially similar for the large operators that those of the Philadelphia and Reading Coal and Iron Company may be regarded as typical. This company's regular circular price for stove coal, f. o. b. New York Harbor, had been \$5.00 at Port Liberty (an upper port) and \$4.95 at Port Reading (a lower port). In 1912 this was made \$5.25 and \$5.20 respectively. There was a similar advance in the price f. o. b. Port Richmond (Philadelphia), bringing the price of stove coal at this port up to \$5.00.³ These prices were subject to the customary June discount of 30 cents,

¹ *Increase in Prices of Anthracite Coal*, 1913. 3rd Sess., 62d Cong., House of Repres. Report no. 1442, pp. 23-26. Referred to hereafter as *House Report*, 1913, no. 1442.

² *Ibid.*, pp. 11, 62.

³ *Mineral Resources*, 1912, pt. 2, p. 185.

and the new price did not apply in full, therefore, until September. At the time of these advances it was frequently stated that they had to be borne by the domestic sizes alone, as the steam sizes, being in competition with bituminous coal, could not be sold at a higher price. But as a matter of fact, the price of all the steam sizes was considerably increased, and these increases, while less in amount than on the prepared sizes, represented, nevertheless, a much larger percentage of the selling price.¹

These increased price schedules soon led to a governmental investigation. The Bureau of Labor was directed by the House of Representatives to determine the amount of the advances, and the extent to which the miners had benefited by the new wage schedule. In justification of their action the coal operators claimed that an advance in prices was necessary in order to meet the increased wage requirements imposed by the agreement with the miners, and to offset the increases in other mining costs which had taken place between 1902 (the date of the last general increase in prices) and 1912, largely as the result of more difficult physical conditions of mining, higher taxes, and more stringent mine laws.² With respect to these claims, the Bureau reported (March 1, 1913) that the average price of anthracite coal had increased about 16 cents over and above the increase in wages granted to the miners in 1912,³ and that this additional sum was

¹ *House Report*, 1913, no. 1442, pp. 57-58.

² *Ibid.*, p. 12. In this connection it should be noted that the average mining cost is increased through the operation of unprofitable collieries. Upon this point the remarks of the president of the Delaware and Hudson Company are of interest. "Our investigation of the subject leads us to believe that the independent operators do not mine the coal from any veins where the operation is not a profitable one, while the opposite is true where the mines and railroads are controlled by the same people. The moment an independent operator finds the mine unprofitable, he abandons it and starts up another operation at some other location. However, where there is joint control of the mines and railroads, the tonnage (and necessarily the profits) of the railroad is largely dependent upon uninterrupted supply and steady average amounts of the products of the mines located on such roads, and where the failure to realize profits in mining is compensated by the additional profit in the operation of the road on account of the coal tonnage, it naturally follows that looking forward to the future of the property, they can afford under these circumstances to mine the coal from these veins, even without a profit on mining." — *House Report*, 1913, no. 1442, p. 15.

³ An independent calculation made by the author, covering a somewhat longer

"more than sufficient to compensate fully those companies whose costs of production have increased most rapidly during recent years and at the same time has very greatly increased the profits of those companies, of whom there are at least several, whose costs of production either decreased or remained stationary during the same period."¹ The Bureau of Labor further pointed out that, because of the unusual activity in the latter part of 1912 after the settlement of the strike, the mining costs of one important company were actually lower during the last six months of 1912 than during any year since 1903, in spite of the increased wage payments required by the settlement of May 20, 1912, and that, as a result of the high price charged, the net earnings of this company during the last six months of 1912 exceeded the net earnings of any entire year since 1902.²

It would appear, therefore, that the burden of the strike of 1912 was shifted to the consumers of coal, and that an additional toll was taken to increase the profits of the anthracite companies.³

period than that considered by the Bureau, confirms the correctness of the Bureau's figures.

¹ *House Report*, 1913, no. 1442, pp. 12, 33.

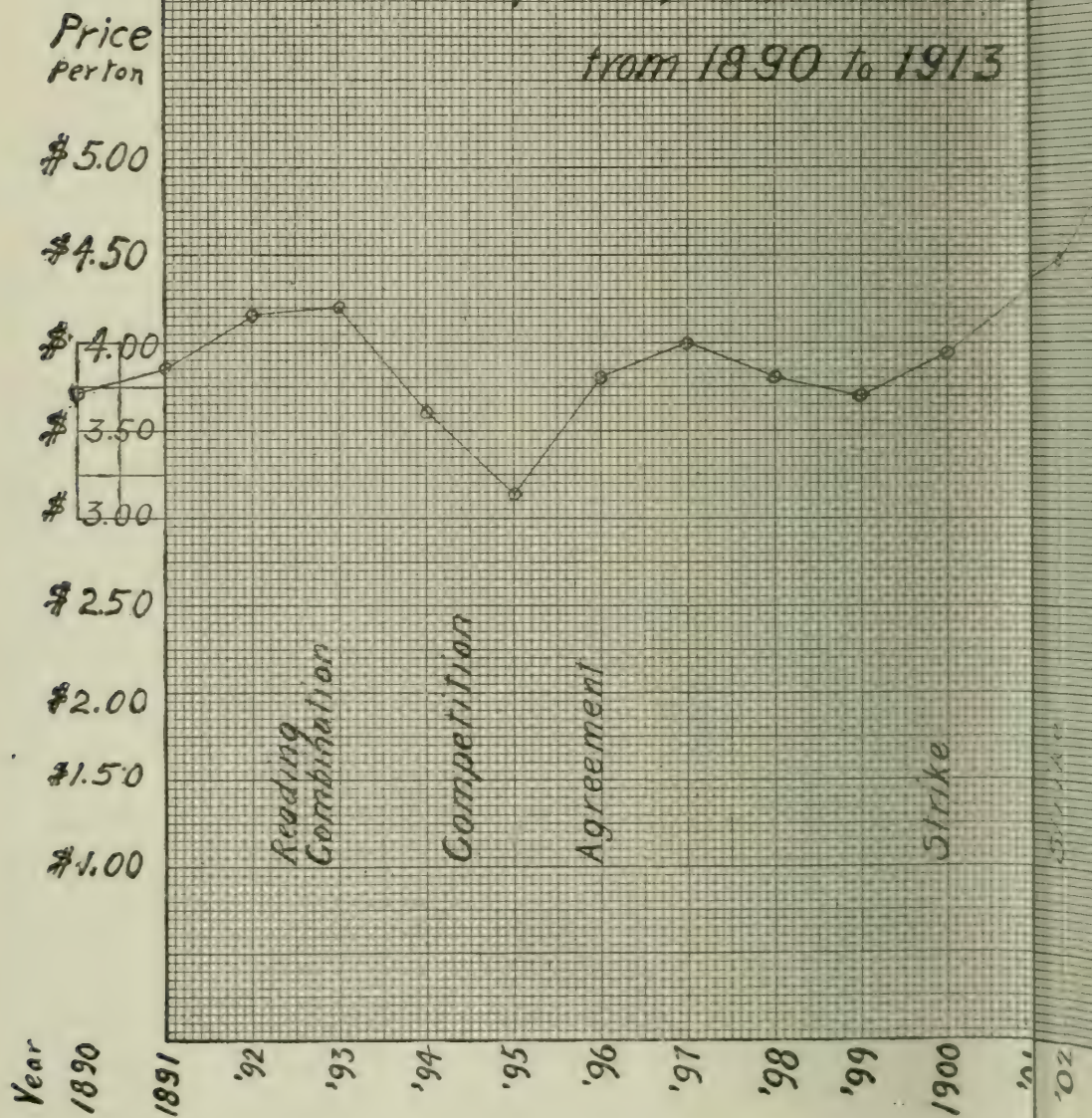
² *Ibid.*, p. 13. A further profit, in addition to that resulting from the higher price of their own coal, was secured by the railroads or their coal companies. Until the decision of the Supreme Court in December, 1912, these companies bought a large amount of coal under the 65 per cent contracts. The operators under contract paid the miners the same increase in wages as the larger coal companies, but received only 65 per cent of the 25 cents advance on the prepared sizes, or 16.25 cents per ton to compensate for increased mining costs. The balance (8.75 cents) went to the railroad coal company. The latter, therefore, not only got 25 cents more per ton on the prepared sizes to compensate for the higher cost of mining, but, in addition, 8.75 cents on every ton of prepared sizes bought under contract. This additional profit, however, proved short-lived, as these contracts were shortly thereafter declared illegal by the Supreme Court.

³ A still further increase in the price of coal may follow in the near future. In the latter part of June, 1913, a bill passed the Pennsylvania Legislature providing that every ton of anthracite prepared for market in the State, shall be subject to a State tax of two and one-half per centum of the value of the coal when prepared for market. (*Laws of Penn.*, 1913, no. 374). The constitutionality of this act is being contested in suits brought for that purpose. Should the tax be upheld, a general increase in the price of anthracite may be expected, if reliance is to be placed upon the trade papers. Some companies have already advanced prices by the amount of the tax, and resolutions have been passed by the Philadelphia Coal Exchange (an association composed of retail dealers) that the price of anthracite will have to be raised because of the tax. (*Chron.*, 97: 215 (1913)).

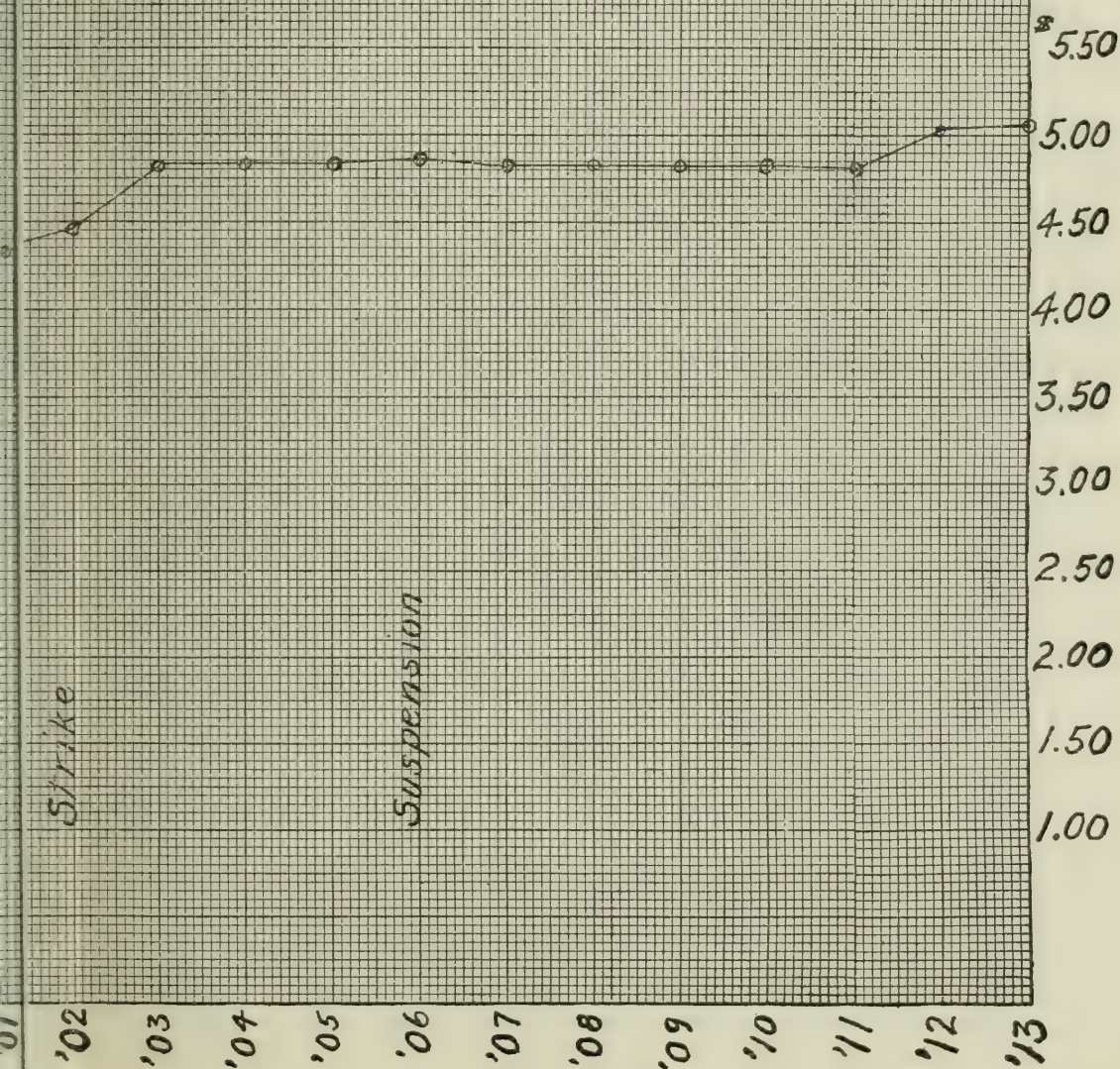
PRICE of STOVE CO.

per ton, L. & L. New York Harbor

from 1890 to 1913



GOAL
Arbor



These increases in the price of anthracite coal in excess of the increase in the cost of mining, and the method by which a uniform advance was brought about, indicate, as has been said, the existence of a combination controlling the anthracite coal trade. More conclusive evidence is furnished by a comparison of the average monthly prices received for coal before 1901, a period of more or less competition, with those received since 1901, in which years a combination has been effectively developed. This comparison will serve to bring out the second influence of the combination, *viz.*, a noteworthy steadying of the price of coal.

An examination of the chart ¹ reveals clearly the great fluctuations in the price of coal prior to 1901. Stove coal rose from \$3.71 in 1890 to \$4.19 in 1893, declined to \$3.13 in 1895, reached \$4.01 in 1897, fell to \$3.70 in 1899, and rose in the following year to \$3.94. The averages for the year varied all the way from \$3.13 in 1895 to \$4.19 in 1893. This irregularity occurred likewise in the monthly prices. In January, for instance, the price varied from \$3.29 in 1896 to \$4.58 in 1893, a difference of \$1.29. In February there was a difference of \$1.12 between the high and low water mark, and in March one of \$.76. Comparisons of August and September, 1892, with the same months in 1895, show a difference of \$1.53 and \$1.67 respectively. The greatest contrasts appear between the high prices of 1892-1893, and the rather low prices of 1895-1896, yet the same irregularity, though somewhat less, occurs in all the other years, whether a comparison be made of the prices for the same month in different years or the prices for the twelve months of the same year. The year 1897, however, is an exception, as in that year the price received was quite uniform save for the last month of the year.

In marked contrast is the movement of prices since 1901. The average price for the year rose from \$3.94 in 1900 to \$4.32 in 1901, to \$4.46 in 1902, to (after the introduction of the new price schedule in the closing months of 1902) \$4.82 in 1903, and from then until 1912 remained steadily at \$4.82 (\$4.81 in 1911), with the exception of the year 1906, when the average for the year was slightly higher on account of the suspension of the usual April

¹ Based on the table on pp. 156-157.

discount. This remarkable steadiness of price was not affected even by the panic of 1907 and the resulting depression, the average for the year and the monthly prices showing no change. In 1912 the price rose to \$5.03, and in 1913 to \$5.06. This same general stability of price appears upon an examination of the average monthly selling price. With the exception of the summer discounts the price from November, 1902, to May, 1912, and from June, 1912, to December, 1913, has steadily averaged \$4.95 and \$5.20, respectively, with only the difference of a cent here and there. The only divergence from the regular price of \$4.95 (\$5.20 since June, 1912) is in the summer months, April to August. This variation strengthens, however, rather than weakens the conviction that the price of anthracite is controlled by a combination of carriers, or their respective coal companies. In April, 1901, there was introduced the summer discount, whereby the circular price was reduced 50 cents per ton in April, and then increased 10 cents per ton in each succeeding month, until the full price was reached in September. This discount has been made regularly every year since 1901, with two exceptions. In 1906 none was made in April, because of the suspension of mining operations in that month, which made it seem inadvisable to stimulate the demand for coal at a time when there was considerable prospect of a scarcity. The regular May discount, however, was put into effect, and the course of prices for the rest of the year was as usual. In 1912, also, the April and May discounts were omitted for similar reasons, but in June the regular discounts were restored. The fact that the discounts from the standard price occur regularly indicates that, whereas prior to 1901 prices varied in accordance with the condition of the trade, after 1901 guiding hands have held them steady, such changes as take place coming uniformly and at a definite period.

So far as its effect upon the trade is concerned, the practice of giving a discount in the summer months has exerted a beneficial influence. Prior to its introduction in 1901, there had been a considerable concentration of the shipments (and production) within certain months of the year. The collieries had been operated at practically full capacity during the fall and winter months,

and had lain idle or had been operated at partial capacity during portions of the spring and summer months. The policy of reducing prices during the summer, when the demand normally would be at its lowest, has been successful in equalizing the production throughout the year. This is shown by the results in 1911, a normal year. The average shipments for the six months from April to September were 5.7 million tons, and those for the first three months and the last three months averaged 5.9 million tons.¹ As a general thing, the collieries are now operated practically as actively in summer as in winter.

The discount system, therefore, has made it possible for the mining companies to operate at much nearer full capacity than was possible prior to the adoption by the combination of a definite price with regularly recurring discounts. And the ability to operate more continuously has added greatly to the profits of the anthracite companies, as a considerable element of expense continues whether or no the mines are in operation. This would seem to be the only "economy of combination" which has been secured, and from the very nature of the combination, the only economy which can be secured, unless some arrangement is made for a joint selling agency. Proposals looking toward this end have been suggested, but have never yet been carried out. But so far as it goes, the policy of a stable price with regular seasonal deductions has been helpful in securing a more even distribution of production, and thereby reducing for the anthracite companies the costs of operation, and for the miners the all too great irregularities of employment.

To return from this digression, the control of the trade by a combination is indicated in still another way, by a comparison of the variation of the selling price from the circular price during the period of competition and during the period of combination. The variation in 1899, the year preceding the rise in price in 1900, is shown in the table on the next page.

As there was some difference in the circular prices of the different companies in 1899, those of a typical company, the Lehigh and Wilkes-Barre Coal Company, have been taken. It has not been

¹ *Mineral Resources*, 1912, pt. 2, p. 187.

possible to ascertain the prices actually received for stove coal alone by this company in 1899, hence use has been made of the average selling price of stove coal for all the companies. Exact comparisons, therefore, cannot be drawn, yet the prices received by the Lehigh and Wilkes-Barre Coal Company approximate closely enough the average price received by all the companies to show that in 1899 the circular price was not well observed.

	Circular Price ¹ of Lehigh and Wilkes-Barre Coal Co. on Stove Coal, New York Harbor	Actual Average ² Monthly Selling Price, as Quoted by the Bureau of Labor		Circular Price of Lehigh and Wilkes-Barre Coal Co. on Stove Coal, New York Harbor	Actual Average Monthly Selling Price, as Quoted by the Bureau of Labor
January....	\$3.95	\$3.56	August....	\$4.15	\$3.68
February...	3.90	3.54	September..	4.15	3.80
March.....	3.90	3.52	October....	4.15	3.91
April.....	3.90	3.56	November..	4.15	3.95
May.....	3.90	3.63	December..	4.15	3.98
June.....	3.90	3.65			
July.....	4.15	3.67	Average...	\$4.03	\$3.70

There was considerable variation in each month, and the average selling price for the year was 33 cents below the circular price of the company. The function of the circular seems to have been to serve as a basis for a discount in prices.

Since 1903 the circulars of the different companies have been uniform for the same grade of coal³ (with this exception, that the prices quoted by the companies reaching the lower ports are 5 cents a ton less than those for the companies reaching the upper ports). The circular price at the lower ports and the average monthly selling price for 1903 are shown on the following page. It is apparent that the divergence of the selling price from the circular price of \$4.95 for the lower ports and of \$5.00 for the upper ports was very slight in 1903, and as both the circular and the selling prices remained about the same until the recent advance in 1912,⁴ it is clear that the circulars have been adhered

¹ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exh. 191.

² *Bulletin of Bureau of Labor*, March, 1902.

³ *Transcript of Record in Sherman Anti-Trust Case*, ii, p. 122. Testimony of the general sales agent of the Lehigh and Wilkes-Barre Coal Company.

⁴ The Bureau of Labor states (March, 1913) that on the popular domestic sizes — egg, stove, and chestnut — the full circular price is ordinarily obtained. *House Report*, 1913, no. 1442, p. 56.

to closely. The president of the Lackawanna admitted that, though they were continually seeking new markets and new customers, they had not found it necessary to depart from the circular price.¹ The sales agent of the Philadelphia and Reading Coal and Iron Company testified that his company had generally allowed dealers 15 cents off from its earlier circulars, but that no deduction was allowed from the circular issued after the strike of 1902, the first time within his recollection that no discount had been permitted.²

	Circular Price for Lower Ports ³	Actual Selling Price at Lower Ports ⁴		Circular Price for Lower Ports	Actual Selling Price at Lower Ports
January	\$4.95	\$4.95	August	\$4.85	\$4.85
February . . .	4.95	4.95	September .	4.95	4.95
March	4.95	4.95	October	4.95	4.95
April	4.45	4.45	November . .	4.95	4.95
May	4.55	4.55	December . .	4.95	4.95
June	4.65	4.64			
July	4.75	4.75	Average . . .	4.82	4.82

The close adherence to the circular price is brought out also by the table⁵ on page 170, showing the difference between the circular prices for stove coal published by the companies, and the prices actually received by them.

The two months, April and December, are representative, April being the month of the full discount, and December a month when the regular price has again been reached. The divergence in the case of the Lehigh Valley Coal Company, the Lehigh and Wilkes-Barre Coal Company, the Lackawanna Railroad, and the Hillside Coal and Iron Company, is very small. The average monthly divergence of the selling price from the circular price is less than one per cent. The Reading Coal and Iron Company

¹ *Files of Interstate Commerce Commission in Hearst Case*, p. 2541.

² *Ibid.*, p. 725.

³ *Transcript of Record in Sherman Anti-Trust Case*, iii, Exhs. 177 and 178. Circular price is \$5 at upper ports.

⁴ *Bulletin of Bureau of Labor*, March, 1904. Correspondence with the Bureau has developed the fact that the wholesale prices quoted by the Bureau are the prices at the lower ports.

⁵ *Transcript of Record in Sherman Anti-Trust Case*, vi, Erie Railroad Exhs., no. 18, pp. 509 *et seq.* Figures italicized represent excess of price received above circular price; those not italicized indicate excess of circular price above price received.

alone appears to disregard its circular. Its figures, however, need some explanation. Mention has been made of the fact that up to the latter part of 1902 the Reading Coal and Iron Company generally allowed dealers 15 cents off from its circulars, which brought the prices received by it to just the level of the prices received by the other companies. After making this correction it would appear that this company still received less than did the

	P. & R. C. & I. Co.	L. V. C. Co.	L. & W. B. C. Co.	Lacka.	H. C. & I. Co.
December, 1900.....	\$0.31	\$0.02	\$0.02	\$0.04	\$0.13 ¹
April, 1901.....	.20	.02	.02	.02	.04 ¹
December, 1901.....	.20	.04	.01	.01	.01
April, 1902.....	.20	.04	.01	.00	.02
December, 1902.....	.05	.08	.00	.00	.01
April, 1903.....	.05	.05	.00	.00	.01
December, 1903.....	.05	.00	.00	.00	.01
April, 1904.....	.05	.03	.00	.00	.03
December, 1904.....	.05	.01	.01	.00	.02
April, 1905.....	.05	.02	.00	.00	.03
December, 1905.....	.05	.00	.00	.00	.02
April, 1906.....	.05	.02	.00	.00	..
December, 1906.....	.05	.00	.00	.00	.02
April, 1907.....	.05	.02	.00	.01	.02
December, 1907.....	.05	.01	.01	.00	.02
April, 1908.....	.05	.01	.00	.00	.02
December, 1908.....	No circular prices	.00	.00	.00	.01
Total.....	\$1.51	\$0.37	\$0.08	\$0.08	\$0.42

other coal companies. The difference of 5 cents, appearing regularly, can, however, likewise be explained. The circular of the Reading quotes the price at Port Liberty, which is the base, but the main terminal of the Reading Railway, at which practically all the tide-water coal is sold, is Port Reading. The price received at Port Reading is 5 cents less than is the price at Port Liberty, in order to make up for the greater cost of towing from Port Reading.² When these corrections are made, it is evident that there has been no divergence of the selling price from the circular price.

This uniformity of the price circulars and of the prices received by the different companies seems to have been brought about at

¹ Includes Pennsylvania Coal Company.

² *Transcript of Record in Sherman Anti-Trust Case*, iv, p. 605.

times through conferences of the presidents of the coal companies, meeting "casually." An instance of one of these meetings is furnished in the testimony of President Olyphant of the Delaware and Hudson. During the strike of 1902 the market price of coal for a time was \$8 or \$9. President Olyphant was asked: —

How was it that this common price of \$5 a ton was maintained by the companies when the market price was \$8 or \$9? — Mr. Olyphant: It was because of consideration for the public, that we desired to serve decently. — Mr. Shearn: With whom did you discuss the matter before you came to that conclusion? — Mr. Olyphant: I think at a meeting not held with reference to that matter but one necessitated by the conditions of the strike — it was a casual remark made by a president of a coal company, I forget now who — "Well, don't let us put the price above \$5 to the public, anyhow," and everybody said, "That is right," and we went off with that idea. There was no more conference than that about it. — Mr. Shearn: Do you recollect who were present, Mr. Olyphant? — Mr. Olyphant: I think the presidents of the roads — and outside coal operators and others. — Mr. Shearn: Was Mr. Baer there? — Mr. Olyphant: I hope so, he is a pleasant fellow. — Mr. Shearn: What is your recollection as to whether Mr. Baer was there? — Mr. Olyphant: I think probably he was. — Mr. Shearn: And President Thomas, do you recollect whether he was there? — Mr. Olyphant: Yes, sir; I just told you I thought they were all there. — Mr. Shearn: Do you recollect who it was that made the suggestion at that meeting? — Mr. Olyphant: I told you I did not. I think I was going out the door at the time. — Mr. Shearn: Then, it was a casual remark, made as you were going out the door that settled what the price of coal was going to be? — Mr. Olyphant: Yes, sir. I am sure the public were very much obliged to us for doing it.¹

The workings of the system were shown by the editor of the Coal Trade Journal. When asked by the Industrial Commission how he explained the uniform circular, if there was no agreement, he answered: —

A. Oh, I don't know. It is the advance in civilization, I guess. . . . I do not know but there is a telephone that might be used by somebody to ask, "What are you going to ask for coal? I have my circulars all at the printer's and I am ready to send them out. I am going to ask so and so." "All right," might be the response; "I will ask the same." . . . Q. This communication by telephone or wireless telegraphy, whatever you might call it, answers the same purpose as the combination would, does it not? — A. It seems to be a wonderful invention; it beats writing on a piece of paper and putting a signature to it. — Q. In what way does it beat it? — A. No record kept. — Q. In other words, if there were a record kept, would it be an illegal

¹ *Files of Interstate Commerce Commission in Hearst Case*, pp. 1338-1340.

combination, conspiracy, or something of that kind? — A. So construed by a good many lawyers in Congress, you know. — Q. It might be conspiracy in restraint of trade? — A. It might be.¹

The general course for a number of years appears to have been for the Reading, as the largest producer, to issue its circular, and for the others to adhere to the price thus fixed. There is considerable testimony upon this point. Mr. Peters, whose firm handles the product of the Hillside Coal and Iron Company and of the Pennsylvania Coal Company, said in speaking of the Reading Coal and Iron Company, "they are the largest producers, we look to them as the fathers of the anthracite trade, they have been in a good many years, and when they have made their figures we endeavor to get as much money for the product of the people we represent as the Reading; if we could not, I do not believe we could hold our jobs."² President Olyphant of the Delaware and Hudson said, "I think the general course has been for the Reading, it being the largest company, to put out its price and all the others have to do is to follow."³ President Truesdale of the Lackawanna, when asked to explain how it was that the circulars were uniform, if there were no agreement, said, "There is no agreement or understanding. One company fixes — one of these leading companies fixes its price on coal and fixes the discount. None of the other companies can get more than that; it is absolutely out of the question."⁴ Mr. Harris, formerly president of the Reading, testified that the other companies frequently followed its circular, though it was a matter entirely of their own volition.⁵ The sales agent of the Reading Coal and Iron Company also testified that he sent the price circulars of his company to the sales agents of all the other companies, but this was purely a matter of courtesy.⁶

President Baer has explained why it is that the price circular of the Reading is the standard. "The price of the entire supply of

¹ *Industrial Commission*, ix, pp. 516-517.

² *Files of Interstate Commerce Commission in Hearst Case*, p. 1307.

³ *Ibid.*, p. 1335.

⁴ *Ibid.*, p. 2421.

⁵ *Industrial Commission*, ix, p. 604.

⁶ *Files of Interstate Commerce Commission in Hearst Case*, pp. 718-720.

anything necessary for a community will be regulated by the cost of production of that portion of the necessary supply which is produced at the greatest expense." "If the price of anthracite coal were fixed so as not to yield a profit to our Coal and Iron Company, the result would be that the mines would stop for a short time, and the price of coal would necessarily go up, because the withdrawal of thirty per cent of any commodity would naturally affect the price, and the final result would be that, the price advancing our mines would resume operations again. Therefore, it is the general custom of the other companies, I believe, to follow our circular. We fix the best price we can get, and the Wyoming region and the people that can produce coal cheaper than we do, necessarily follow our price, because it would be foolish for them to undertake to cut it, when there is a market for the reasonable output of existing mines, taking it year in and year out." ¹

The other coal companies were able without any difficulty to keep their prices on a level with those of the Reading Coal and Iron Company, because the determination of prices was vested in the hands of their presidents, who realized the advantages of harmonious action. The sales agent of the Lehigh and Wilkes-Barre Coal Company testified that President Baer determined the price to be charged by the coal company. Mr. Baer generally sent his instructions just before the first of each month. He (the sales agent) never made any changes in these prices without first consulting Mr. Baer.² The presidents of several of the other coal companies testified that the price of coal was fixed under their direction. Up to 1912 it seemed to be mutually understood that the circular price was to be \$4.95 (\$5.00 at the upper ports), with the regular summer discounts. No more binding arrangement appeared to be necessary. And since the middle of 1912 the understanding has been that the price is to be \$5.20 and \$5.25, respectively.

The railroads or their coal companies control the wholesale price of coal in New York Harbor. In some cases these coal com-

¹ *Transcript of Record in Sherman Anti-Trust Case*, v, pp. 1176-1177.

² *Files of Interstate Commerce Commission in Hearst Case*, pp. 799-800.

panies maintain their own sales offices, and conduct the business directly through their sales officers. In other cases the business is carried on through regularly appointed agents working on a commission basis. But between these different companies, or their sales agents, there is no competition affecting the price of coal. Such competition as there is bears on the quality of coal and its preparation. An illustration may be given of the way in which competition in prices has been prevented. In 1901 there had been considerable price-cutting in Brooklyn, always a highly competitive market. Mr. Ruley, the head of the Bureau of Anthracite Coal Statistics (this Bureau is paid by the carriers to collect the statistics of tonnage and prices) was requested (in 1901) by one or two of the coal companies to ascertain the prices in the Brooklyn market. The Bureau thereupon collected monthly from each railroad coal company information as to the amount of its sales in Brooklyn, with the prices received. These prices were compiled in a table, and sent to the various companies, — this has been done regularly since then with the result that the discrepancies between the prices received by them have been much less than they were in 1901, when the statistics were first compiled. This report was made solely with reference to the Brooklyn market, and was not necessary for any purpose relating to the price of labor or the amount which was to go to the individual operators under the percentage contracts. It was prepared in order to eliminate the shading of prices, it being believed that the practice would be stopped, were the fact of price-cutting generally known, and Mr. Ruley's testimony indicates that the report has had this effect.¹

Fortunately for the anthracite companies there is no foreign competition to be feared. Though anthracite coal has been free of duty since 1870, practically no coal has ever been imported. The greatest imports in any one year were in 1903, when 151,000 tons were brought in. In the two strike years, 1900 and 1902, when the need for anthracite was at its greatest, the imports were only 118,000 and 73,000 tons respectively, and in 1909 the

¹ *Transcript of Record in Sherman Anti-Trust Case*, v, pp. 982, 988-990.

imports were less than 5,000 tons.¹ So far as its effect on the combination is concerned, foreign competition may be said to be non-existent.

The competition of other fuels does not operate to limit markedly the price which the combination may set. The principal competitor of anthracite is soft coal. The lower price of bituminous coal has confined the sale of anthracite to the eastern states, and those western cities which are accessible by the lakes. But for domestic purposes anthracite is so far superior to bituminous that its relative dearthness has not prevented anthracite from finding a market at high prices in the sections of the country accessible through comparatively low freight rates. The competition of bituminous affects primarily the smaller sizes of anthracite, which are used for steam purposes. These small sizes, which are a by-product of the larger or domestic sizes, are sold at varying prices, according to the grade, but approximate more nearly the prices charged for bituminous coal. To some extent, also, coke, gas, and petroleum oils enter into competition with anthracite, but not sufficiently to limit to any considerable degree the price which may be charged for anthracite. As much was admitted by the counsel of the Philadelphia and Reading Railway in the Hearst Investigation in 1903. Mr. Campbell in a moment of impatience said, "This Commission knows now as well as they will if they call a thousand witnesses that the price of coal today is approximately \$5 a ton; that it could be \$8 or \$10 if the operators demanded that price."²

To control the wholesale price of coal in the New York market is to control the price in the main distributing center for anthracite. The shipments of coal to the New York Harbor points are approximately 25 per cent of the total shipments, and about 30 per cent of the shipments passing outside of the State of Pennsylvania.³ The importance of the New York market is seen, also,

¹ Saward's *Coal Trade*, 1901-1910; and O. P. Austin *Summary of Commerce and Finance*, September, 1902, p. 709.

² *Files of Interstate Commerce Commission in Hearst Case*, pp. 1344-1345.

³ *Transcript of Record in Sherman Anti-Trust Case*, ii, pp. 647, 648, 650, 688, 706, 738; iii, pp. 197, 214, 220; also *Original Petitions in Reading Case and Lehigh Valley Case*, see Biblio. nos. 172 and 173.

in the fact that the price there served until 1912 as the basis for the payments to the individual operators under the percentage contracts, and also as the basis for the sliding scale of wages.¹ The railroad coal companies control likewise the wholesale price of coal in Philadelphia, the main distributing point for Pennsylvania. The circular price of stove coal there, for example, is consistently 25 cents less per ton than it is at the upper New York Harbor points.² The important consequences of controlling the market at these centers becomes clear upon a consideration of the movement of anthracite to market. In general anthracite may be said to move to New York and Philadelphia for further transportation north and south, and to Buffalo for transportation west. From New York and Philadelphia the coal is shipped coastwise or by rail to New England points, and to a smaller extent southward, the southern trade being distributed along the Delaware and Maryland peninsulas to Baltimore, Washington, and other points within easy reach of the coast. The movement of anthracite westward is chiefly effected from Buffalo, shipments being made by lake to Chicago, Milwaukee, Duluth, and Superior. The consumption of anthracite in the west is primarily in the towns accessible to the lakes, the long railroad haul to the interior towns making the price practically prohibitive. In Cincinnati, for example, the receipts of anthracite in 1907, a typical year, were only about 25,000 tons, which was less than 1 per cent of all the coal received at Cincinnati.³

The distribution of the consumption of anthracite in further detail is given in the following table.⁴ This shows the consumption in the different sections of the country (including the exports to foreign countries) in 1882, the first year in which the statistics were kept, and in 1905, the last year for which they are available.

¹ In 1912 the Supreme Court declared the percentage contracts illegal; and the sliding scale of wages was abolished by the mutual consent of the operators and the miners.

² Seward's *Coal Trade*, 1911, p. 111; also *Mineral Resources*, 1912, pt. 2, p. 185.

³ Seward's *Coal Trade*, 1911, p. 23.

⁴ *Annual Report of the Geological Survey of Pennsylvania*, 1886, pt. 3, p. 1043, for 1882; and Seward's *Coal Trade*, 1908, p. 130 for 1905. For the distribution of the consumption of anthracite by states in 1899, see Appendix, Table V.

	1882		1905	
	Total Tons	Per Cent	Total Tons	Per Cent
N. Y., Penn., & N. J.....	19,957,000	68.54	41,501,000	67.58
New England.....	5,064,000	17.39	8,692,000	14.15
West.....	2,213,000	7.60	6,904,000	11.25
South.....	1,168,000	4.01	2,080,000	3.39
Pacific Coast.....	49,000	0.17	1,000	.00
Canada.....	616,000	2.12	2,187,000	3.56
Other countries.....	49,000	0.17	42,000	.07
Total.....	29,120,000		61,407,000	

Between 1882 and 1905, a period of nearly twenty-five years, the consumption of the west increased relatively, and that of the New England states declined (relatively only), but otherwise there was very little change in the distribution of the consumption of anthracite in those sections of the country for which the statistics have been collected. In 1905 about 30 per cent of the coal shipped to market was consumed within the State of New York, 19 per cent in Pennsylvania (not including the coal consumed at the mines or locally), and 12 per cent in New Jersey, making a total consumption within these three states, including the supply coal of the railroads, of 67.58 per cent, or over two-thirds of the total.¹ A little over 14 per cent of the total shipments were consumed within the New England States, about 11 per cent in the western states, not including the Pacific Coast where the consumption is practically nil, somewhat less than 4 per cent is taken by the southern states, about the same amount by Canada, and less than 1 per cent is shipped to foreign countries.

To fix the price at New York Harbor and at Philadelphia is to fix within fairly definite limits the price in those states which are accessible to these main distributing points, — that is, New York, New Jersey, Pennsylvania, and the New England States. These states consume over four-fifths of all the anthracite coal shipped to market.

The wholesale price at these distributing points determines to some extent, as a matter of course, the retail price to consumers throughout the field of distribution. The regular wholesale price of stove coal at New York Harbor is, as noted above, \$5.20 at the

¹ *Argument of counsel for defendant railroads in Commodity Clause Cases*, p. 34. See Biblio. no. 167.

lower ports and \$5.25 at the upper ports, subject to the usual summer discount. There is, however, a towing charge to the docks of New York City of 20 cents from the lower ports, and 15 cents from the upper ports, making a uniform price in New York City of \$5.40. This is the price per long ton of 2,240 pounds. Anthracite is retailed, however, by the short ton of 2,000 pounds. The wholesale price per short ton, therefore, would be \$4.82. The prevailing retail price of this coal for the family trade is (1913) \$6.75 during the winter months with the customary discount in the summer months.¹ Over one-fourth of the price paid by the consumer is made up, therefore, of the retailer's charges. Various proposals have been made looking toward a lessening of the margin between the wholesale and the retail price of coal. This margin, however, is large in the case of many other commodities. The case of coal, therefore, is but a part of the general problem.

To sum up: the wholesale price of coal has increased rapidly since 1900, a rise only partially explained by the increased cost of mining. The rise in price has been accompanied by a remarkable stability in price from year to year, and from month to month. The circulars issued by the several coal companies have been uniform, and the deviations from the circular slight. This stability is, doubtless, the result of an understanding, not necessarily arrived at in a conference to fix prices, but presumably based on a tacit agreement to follow the price circulars of the Reading

¹ Retail price bulletins of the Bureau of Labor. See also *House Report*, 1913, no. 1442, pp. 69-71. The table below showing the "prevailing" retail price of stove coal in representative cities on October 15, 1913, may be of interest.

	Short Ton of 2000 Lbs.		Short Ton of 2000 Lbs.
Scranton, Pa.....	\$4.50	Chicago.....	\$8.00
Philadelphia.....	6.25	Milwaukee.....	8.00
Newark, N.J.....	6.25	St. Louis.....	8.00-8.25
New York.....	6.75	Indianapolis.....	8.25
Buffalo.....	6.80	Manchester, N.H.....	8.75
Charleston, S.C.....	6.90	Jacksonville, Fla.....	9.00
Cleveland.....	7.50	Minneapolis.....	9.25
Richmond, Va.....	7.75	New Orleans.....	10.00
Boston.....	8.00	Omaha.....	10.75

For an account of the abnormal heights to which the retail price of coal rose in certain cities on account of the scarcity occasioned by the suspensions in 1912, see *House Report*, 1913, no. 1442, pp. 69-84; also retail price bulletins of the Bureau of Labor.

Coal and Iron Company. Such harmonious action is rendered possible by the control exercised over prices by the presidents of the coal companies. It is facilitated by the absence of foreign competition and of any effective competition of other fuels. The fixing of the wholesale price at New York and Philadelphia determines roughly the price in those large areas which draw their supply from these distributing points.

CHAPTER VIII

THE LEGAL STATUS OF THE COMBINATION

THE conclusions of the previous chapters may be restated in brief. Practically all the anthracite coal that is mined is controlled by the anthracite carrying railroads through their coal companies. These railroads are clearly working in harmony with each other. The wholesale price of coal at tide-water is fixed by what is, for practical purposes, a combination of coal companies, and the power of this combination to fix the price is not limited at present by any fear of foreign competition, nor to any considerable extent by the danger of losing its market through the use of substitutes. The combination fixed in 1900 a materially higher price for anthracite coal — a price which has been steadily maintained, or increased. Numerous attempts have been made to dissolve this combination. The present chapter deals with these attempts.

The policy of the State of Pennsylvania, up to the time of the adoption of the Constitution of 1874, was, as has already been told in some detail,¹ to encourage the development of its anthracite coal fields by granting to the railroads mining privileges, or the authority to acquire the stock of companies engaged in the mining of coal. The abuses attendant upon this policy led in 1874 to a constitutional prohibition against the uniting of transportation and mining privileges. This prohibition, however, had little effect. In spite of numerous investigations and suits — state and national — there was built up, within a few years after 1898, a combination which has controlled effectively the production of coal, has prevented competition in its shipment to market, and has determined its selling price. The different companies joined together in this combination became involved in serious labor difficulties in both 1900 and 1902. The strike of 1902 was especially

¹ See ch. II.

bitter and prolonged, being settled finally through the intervention of the President of the United States, and by the appointment of a Commission to adjudicate the questions at issue. The Commission awarded an increase in wages, an award which served for the combination as the justification for a considerable advance in the price charged for coal.

The strike of 1902 and the resulting rise in price provoked the first attack upon the combination. Mr. William Randolph Hearst on November 3, 1902, filed a petition with the Interstate Commerce Commission to secure the dissolution of the anthracite coal combination.¹ Mr. Hearst had endeavored to persuade the Attorney General of the United States to institute proceedings under the Sherman Anti-Trust Act, but having failed in this, he addressed the Interstate Commerce Commission. His petition complained that the Philadelphia and Reading, the Central of New Jersey, the Lehigh Valley, the Lackawanna, the Delaware and Hudson, the Pennsylvania, the Erie, the New York, Susquehanna and Western, and the New York, Ontario and Western² were charging rates that were unreasonable in violation of Section 1 of the Act to Regulate Commerce; that discriminated against producers who did not ship on a contract basis in violation of Section 2; that were unduly high as compared with the rates on bituminous coal and other carload freight in violation of Section 3; and finally that the Philadelphia and Reading, the Central of New Jersey, the Lehigh Valley, the Lackawanna, the Erie, and the New York, Susquehanna and Western were pooling traffic and earnings in violation of Section 5.³

The Interstate Commerce Commission began the taking of testimony in April, 1903, but was much hampered in its investigation by the refusal of the officers of the railroads and their subsidiary coal companies to produce the percentage contracts providing for the purchase of coal from the individual operators, to produce further the contracts entered into in connection with the Temple

¹ *Annual Report I. C. C.*, 1902, p. 261.

² The complaint also included the Baltimore and Ohio, but this road originates no anthracite traffic.

³ 194 *U. S.* 27-28.

Iron Company transaction, and by their refusal to answer certain questions as to the fixing of prices, and certain other matters which the Commission held to be germane to the inquiry. Upon the refusal of the defendants to comply with its order upon these points, the Commission took the case to the Circuit Court for the Southern District of the United States. Its petition was denied, however, save for one unimportant exception.¹ The Circuit Court held (June 12, 1903) that the contracts and questions called for had no reference to transportation, and were, therefore, not relevant to the question of reasonable rates, which was the subject matter of the investigation; that the so-called percentage contracts were entirely contracts of purchase, according to which the buyer was to pay the seller a certain percentage of the selling price of coal of a certain size and quality, and were not, therefore, interstate in character.²

An appeal was taken under the expediting act of February 11 and 19, 1903, directly to the Supreme Court.³ This court, in a decision rendered on April 4, 1904, reversed the findings of the lower court. It held that, though the contracts which the Interstate Commerce Commission desired to have produced were nominally between the independent operators and the coal companies, yet since these coal companies were principally owned by the railroads, the railroads were in reality engaged in the purchase of coal, and the transportation of a considerable portion thereof to tide; that as the Interstate Commerce Commission was authorized to investigate the business of these anthracite carrying companies, there was no reason why these contracts, which had a direct relation to a large amount of the railroads' carrying trade, should be withheld from the Commission. It is claimed, said the Court, that the real purpose of the contracts was to fix a rate for transportation to carriers by the percentage retained from the selling price, after deducting the expenses of marketing. If this be true, and if the percentage thus remaining is less than the published freight rates, there is discrimination against the operator not shipping under these contracts. On the other hand, if the

¹ *Annual Report I. C. C.*, 1903, pp. 75-76.

² 123 *Fed. Rep.* 971.

³ *Annual Report I. C. C.*, 1904, p. 32.

coal companies paid the full rate, and failed to realize this much from the percentage of the selling price retained, they would be losing money, and as the coal companies were owned by the railroads, the loss would ultimately be borne by the railroads, and not by the coal companies. The contracts may show that the coal company paid the full rate, and, therefore, that the freight rates received by the railroads do not depend on the percentage contracts, but relevancy does not depend on the conclusiveness of the testimony offered, but upon its legitimate tendency to establish a controverted fact.¹ The Supreme Court held that the Circuit Court erred in all three points, and directed the defendants to produce the contracts and to answer the questions asked.

The Interstate Commerce Commission thereupon reopened its case. It took much testimony, and continued to conduct investigations, even as late as 1906. It, however, never rendered a decision in the case.² Thus, though there was secured much information as to the control of the trade by a combination, which presumably had its effect upon later legislation, but little was accomplished in the way of remedying the abuses concerning which complaint had been made.

The decision of the Supreme Court in the New Haven case,³ rendered in February, 1906, also served to focus attention upon the abuses incident to railroads entering into competition with other companies engaged in business upon their lines. The Chesapeake and Ohio Railroad had agreed to deliver a certain amount of coal to the New Haven Railroad at a contract price which was inadequate to pay the market price of the coal plus the published freight rates of the Chesapeake and Ohio to Newport News, together with the charges thence to the point of delivery. The Supreme Court took under advisement the question whether a carrier, engaged in interstate commerce, has the power, by becoming a dealer in the commodities which it transports, to disregard the published freight rates. The positive command of the

¹ 194 *U. S.* 41-44.

² The Commission formally dismissed this proceeding in February, 1914, probably because of the more elaborate investigation of the anthracite business then being conducted by it.

³ 200 *U. S.* 361-405.

second section of the act, that no departure from the published freight rate shall be made, directly or indirectly, shows, said the Court, that the purpose of the statute is to make the prohibitions applicable to every method of dealing whereby the carrier might effect the forbidden result. Now if, by the mere fact of purchasing and selling merchandise to be transported, the carrier is endowed with the power of disregarding the published rate, it becomes apparent that it possesses the power to concentrate in its own hands the products which are offered for shipment along its line, and to become, therefore, the sole purchaser thereof, and the sole seller at the place where the products were to be marketed; in other words, to create an absolute monopoly. The facts show, that in order to stimulate the production of coal along its line, the Chesapeake and Ohio had bought and sold coal without reference to whether or not the net result would realize the published freight rates, and that as the result of this practice the railroad had for a long time been virtually the sole purchaser and seller of all the coal produced along the line of its road. These considerations, held the Court, serve to demonstrate that the prohibitions of the act concerning undue preference and unjust discrimination are in conflict with the asserted right of a carrier to become a dealer in commodities which it transports, and, as such dealer, to sell at a price less than the cost and the published rates. And even if the result of applying the prohibitions in this way will render it difficult, if not impossible, for a carrier to deal in commodities, yet this affords no excuse for failing to enforce the provisions of the statute. The Court, therefore, perpetually enjoined the Chesapeake and Ohio from taking less than the rates fixed in its published tariff by means of dealing in the purchase and sale of coal.

In 1906 another investigation was conducted by the Interstate Commerce Commission, this time with especial reference to the bituminous coal trade. This investigation was instigated by Senator Tillman of South Carolina. On the 29th of January, 1906, he read in the Senate a memorial from the Red Rock Fuel Company of West Virginia, which complained of discrimination by an interstate carrier. The essential facts in the case were, briefly, as follows: the Red Rock Fuel Company, owning 4,000

acres of coal lands on the line of the Baltimore and Ohio, had asked for sidetrack connections, promising to pay the total cost of these connections. The Baltimore and Ohio refused to provide them, whereupon the Red Rock Company built a side track to the Baltimore and Ohio, and brought proceedings before the Interstate Commerce Commission in May, 1905, to compel the Baltimore and Ohio to furnish a connection.¹ The Commission rendered a decision in November, ordering this connection to be furnished, and incidentally found that the failure of the railroad to provide such connection was due to its interest in other coal companies along its line, to which preference had been shown.² The order of the Commission, however, had been ignored by the railroad. This memorial and numerous letters from coal producers were introduced by Senator Tillman to show the helplessness of the independent operators. In the House of Representatives, it was brought out that the conditions in the petroleum industry warranted an investigation as to oil also. As a result of these disclosures a Joint Resolution was passed by Congress on February 28, 1906, instructing the Interstate Commerce Commission to make examinations into the subject of railroad discriminations and monopolies in coal and oil.³

The Commission, after making a preliminary investigation, began the taking of evidence in April, 1906. At these hearings it was shown that many of the soft coal roads owned directly, or indirectly by stock ownership in other companies, large blocks of coal lands, and in the case of the Pennsylvania Railroad that the officials and the employees of the road owned large amounts of stock in coal companies shipping over the railroad. These shares, it was ascertained, had been given outright to those officials whose influence it had been deemed worth while to secure, including car distributors, train-masters, superintendents,⁴ and even the assistant to the president. The president of the Jamison Coal and Coke Company admitted that his company had presented the

¹ *Cong. Record*, January 29, 1906, p. 1671.

² *I. C. C. Reports*, xi, pp. 438-439, 449.

³ *Cong. Record*, February 26, 1906, p. 2979.

⁴ *Report of the Interstate Commerce Commission on Discriminations and Monopolies in Coal and Oil*; pp. 22-27.

officials of the Pennsylvania Railroad with stock with the object of securing better treatment and facilities from the railroad.¹ Though the report of the Commission on the eastern bituminous coal situation was not made public until late in January of the following year, much testimony was taken in April and May, and this served to arouse public sentiment on the subject and to increase the demand for some legislation, which would prevent such abuses as had been shown to exist.

It is evident, then, that there were many factors directing public attention to the conditions in the coal trade. Those relating especially to conditions in the anthracite industry may be briefly summarized: First, the general consolidation movement, that is, the purchase of several anthracite carriers, the purchase of numerous independent coal companies, and the tying up of many others through the percentage contracts, — resulting in a practical elimination of the independent element. Secondly, numerous labor difficulties. There was a large strike in 1900, a still larger one in 1902 which was settled only by arbitration, and there was a suspension of operations for seven weeks in 1906. These had the effect of arousing the bitter antagonism of the laboring class. Thirdly, discrimination by the railroads against the independent operators. Several suits involving these complaints had been instituted before the Interstate Commerce Commission, notably the Coxe and Haddock cases, brought in 1889 and 1890 respectively, but pending in the courts for many years thereafter. The New Haven case decided early in 1906, though relating to a soft coal road, was important as showing how, by means of dealing in commodities and eliminating the freight rate, a carrier could monopolize the coal traffic along its line, and practically eliminate independent tonnage. Fourthly, numerous governmental investigations into the conduct of the industry. There had been a Congressional Investigation in 1892, and one by the Industrial Commission in 1901. More recently the Interstate Commerce Commission had conducted an inquiry into the anthracite coal business in connection with the Hearst complaint, and an inquiry into the bituminous coal trade. The combination of these factors

¹ *R. R. Gaz.*, 40: 527 (1906).

in conjunction with the agitation for further regulation of common carriers, explains the enactment of far-reaching legislation designed to put an end to, or at least to check, the growth of a movement which had already attained such considerable proportions in the coal business.

The form which this legislation took was an attempt to prevent railroads from engaging in any other business than that of common carriers. The specific clause, designed to effect this result, known as the commodity clause, was a part of Section 1 of the Act to Regulate Commerce, passed June 29, 1906 (the Hepburn Act). The clause as finally enacted provides that

From and after May first, nineteen hundred and eight, it shall be unlawful for any railroad company to transport from any State, Territory, or the District of Columbia, to any other State, Territory, or the District of Columbia, or to any foreign country, any article or commodity, other than timber and the manufactured products thereof, manufactured, mined or produced by it, or under its authority, or which it may own in whole, or in part, or in which it may have any interest direct or indirect except such articles or commodities as may be necessary and intended for its use in the conduct of its business as a common carrier.¹

Just what Congress was attempting to prevent may perhaps become clearer if the legislative history of the clause be followed.

The incorporation of the commodity clause into the Hepburn Act was, in considerable measure, due to Senator Tillman of South Carolina. In connection with the resolution directing the Interstate Commerce Commission to conduct an investigation into coal and oil he expressed in the Senate on February 12, 1906, his dissatisfaction with the Hepburn bill — in the form in which it had passed the House on February 8, 1906. “I want,” he said, “a provision in any railroad law that I vote for which . . . will prohibit any public carrier from owning and controlling a product which is carried over its line. I want this monopoly of the anthracite coal region . . . checked. I want a provision in this law . . . which will prevent any monopoly of the bituminous coal lands on the Atlantic Slope by the Pennsylvania Railroad and its allies. . . . I am going to offer an amendment in committee,

¹ 34 Stat. 584, c. 3591.

and if I do not get it in the bill there I am going to offer it in the Senate, looking to . . . preventing this particular wrong.”¹ Senator Tillman, who was put in charge of the Hepburn bill when it came before the Senate, was strongly in favor of effecting a separation of the businesses of transporting and of mining coal. Furthermore, judging from the opinions later expressed on the floor of the Senate, there appeared to be general agreement upon this fundamental point. Even Senator Foraker, one of the three senators who voted finally against the bill, went so far as to say, “I do not believe that a common carrier should be engaged in any business except only that of a common carrier. I do not believe that a common carrier should be allowed to own coal mines and operate them, except only possibly where they have a vested right with which we have no power to interfere.”²

However, it was three months after the Hepburn Act had passed the House before the commodity clause in any form was introduced into the bill in the Senate. It had not been a part of the original Hepburn bill, was not in the act as it passed the House on February 8, 1906, and had not even been suggested by the Roosevelt administration. It was not referred to the Senate Committee on Interstate Commerce; in fact, at the hearings of the Senate Committee in the previous year no proposition looking toward any interference with the railroads engaged in industrial activities was even considered. But on May 7, only eleven days before the Hepburn Act first passed the Senate, an amendment was proposed by Senator Elkins embodying the principle of a severing of the functions of transportation and of production. In introducing his amendment, Senator Elkins said, “I want to confine the railroads to the legitimate business for which they were incorporated — the transportation of freight and passengers — and to forbid them engaging in any other business, especially the business of mining, producing, and selling coal or any other commodity on their lines in competition with a shipper.”³ This amendment, which was to come at the end of Section 1, provided

¹ *Cong. Record*, February 12, 1906, p. 2428.

² *Ibid.*, March 12, 1906, p. 3672.

³ *Ibid.*, May 7, 1906, p. 6456.

that "It shall be unlawful for any common carrier subject to the provisions of this act, unless authorized by its charter to do so, to engage, directly or indirectly, in the production, manufacture, buying, furnishing, or selling of coal or coke or any other commodity or commodities of commerce in competition with any shipper or producer on its line or lines: provided, That nothing in this act shall be construed to prevent a carrier from mining coal exclusively for its own use."¹ The proviso, "unless authorized by its charter to do so," was inserted as Senator Elkins said, in order to be fair to the railroads which had been authorized many years previously to conduct the business which it was now proposed to regulate, but upon the objection of Senator Gallinger of New Hampshire, the qualifying proviso was struck out.² The amendment of Senator Elkins prohibited a common carrier from engaging in the production of coal. Senator Bailey objected that regulation of the production of coal was beyond the jurisdiction of Congress, and that the prohibition should, therefore, take the form of denying the privilege of interstate commerce to any common carrier engaged in the production or distribution of coal.³ It was pointed out, however, by Senator Daniel of Virginia, that a common carrier should not be prohibited from engaging in interstate commerce, but only from carrying in interstate commerce any articles which were produced by it in competition with other shippers.⁴ An amendment to this effect, proposed by Senator McLaurin of Mississippi and later accepted by Senator Elkins, passed the Senate May 9 by a vote of 67 to 6, — 16 not voting.⁵

With one important exception this amendment coincided in its most significant features with the language of the commodity clause as incorporated in the Hepburn Act, in the form in which the bill passed the Senate on May 18.⁶ This exception was the treatment of timber and the manufactured products thereof. During the course of the debates it was urged by a number of Senators that the clause would work a great hardship on those lumber companies which had built their railroads for the purpose

¹ *Cong. Record*, May 7, 1906, pp. 6455-6456. ⁴ *Ibid.*, May 7, 1906, p. 6458.

² *Ibid.*, May 7, 1906, p. 6456.

⁵ *Ibid.*, May 9, 1906, p. 6570.

³ *Ibid.*

⁶ See p. 190.

of getting the lumber out of the forests and to market. The pressure they were able to bring to bear was sufficient to induce the Senate to accept, on May 17, the amendment of Senator Piles of Washington, that the prohibitions of the clause should not apply to timber and the manufactured products thereof.¹ The pressure of other interests was also observed in the attempt to limit the scope of the clause. The term common carrier included pipe lines for oil, natural gas, and other commodities. Friends of these interests endeavored to secure the adoption of an amendment specifically exempting pipe lines from the prohibitions of the clause. This amendment failed to pass the Senate,² but its object was attained by the substitution in conference of the term "railroad company" for "common carrier." An attempt was made, also, to relieve those railroad companies which were incidental to industrial enterprises from the operation of the clause by limiting its application to those common carriers whose principal business was that of a common carrier. This amendment, however, which would also have relieved pipe lines was defeated in the Senate.³

The Hepburn Act passed the Senate on May 18 by the large majority of 71 to 3 — with 15 Senators not voting. The commodity clause at this stage made it unlawful for any common carrier to transport in interstate commerce any article, other than timber and its manufactured products, which had been manufactured, mined, or produced by it, or under its authority, or which it owned in whole, or in part, or in which it had any interest, direct or indirect. It did not state specifically that the ownership by a railroad of stock in a subsidiary mining or producing company constituted such an interest as was forbidden by law. Senator Tillman, a steadfast advocate of the principle of divorcing transportation and production, had introduced, on May 8, an amendment to prohibit carriers from engaging in interstate commerce, when they were interested by stock ownership or otherwise in mining or producing those commodities which they transported in interstate commerce.⁴ His amendment, however, was not put

¹ *Cong. Record*, May 17, 1906, pp. 7012, 7015.

² *Ibid.*, May 17, 1906, p. 7016.

³ *Ibid.*, May 17, 1906, p. 7015.

⁴ *Ibid.*, May 8, 1906, p. 6513.

to vote. On May 17 he called the attention of the Senate to the fact that the commodity clause in its present form (which was substantially the form of the clause as finally enacted) did not cure the evils for which it had been designed. It did not prohibit the ownership of coal properties through the ownership of stock in coal mining companies; it did not touch the ownership of railroads by coal companies, nor the common ownership of railroads and coal companies; and it did not prevent the control of coal companies by the officials of the railroads. Senator Tillman therefore introduced a comprehensive amendment which met these objections, but which he himself stated was perhaps somewhat broad and drastic.¹ The amendment was voted down without roll call, presumably because of its comprehensiveness. Senator Tillman, thereupon, endeavored to have the words, "by partnership, stock ownership, or any arrangement whatsoever"² inserted in the Elkins amendment, which would have caused the clause to read in substance: It shall be unlawful for any common carrier to transport in interstate commerce any article in which it may have any interest, direct, or indirect, by partnership, stock ownership, or any arrangement whatsoever. This amendment, however, was voted down, 23 to 42.³

As the House of Representatives disagreed to the amendments attached to the Hepburn Act by the Senate, the bill was sent to conference. The conference committee made a report on June 2, recommending with respect to the commodity clause that it should be made to apply to timber and its manufactured products, and that the District of Columbia should be substituted for the district of the United States.⁴ The Senate on June 7 and the House on June 12, rejected the conference report, and appointed new conferees. The report of the second conference was presented on June 23. It recommended that timber and its manufactured products be exempted from the prohibitions of the clause and that railroad be substituted for common carrier;⁵ obvious

¹ *Cong. Record*, May 17, 1906, p. 7012.

² *Ibid.*

³ *Ibid.*, May 17, 1906, p. 7014.

⁴ *Ibid.*, June 2, 1906, p. 7741.

⁵ *Ibid.*, June 23, 1906, p. 9078.

concessions to the timber and oil interests respectively. Senator Tillman, one of the conferees, refused to sign the report on the ground that the influences behind these changes were too sinister.¹ After a prolonged debate on the conference report, in which the pipe line controversy occupied an important part, the Senate, on June 26, disagreed to the report, and the House still disagreeing to the amendments of the Senate, a third conference committee was appointed. Its report was made on June 28, the only change affecting the commodity clause being a substitution of the term railroad company (the legal entity) for railroad, which refers to physical property. Senator Tillman, as before, refused to sign the report, largely because of his disagreement with the recommendations of the conference as to the commodity clause.² The report, however, was accepted by both houses, and the Hepburn bill became law on June 29, 1906.

In the suits that have been brought by the Government to enforce the commodity clause it has been claimed by the railroads that the clause was introduced hastily, and passed with little understanding of its true import, or its far reaching consequences. So far as the history of this session in Congress is concerned, the first contention is substantially correct. The clause was not a part of the original House bill — in fact it had not even been considered in the House — and was first incorporated in the bill by the Senate less than two weeks prior to the first passage of the Hepburn bill by the upper body. Fundamental changes, such as the application of the principle to railroads only, not to all common carriers, were made in conference, but these changes did not affect the anthracite carriers. So far as concerns the form of the measure, the limited opportunity for debate under the fifteen minute rule undoubtedly resulted in a more hastily considered phraseology than the importance of the subject demanded, though it does not follow that this operated to the disadvantage of the interests to be thereby affected. Had a longer discussion obtained, the clause might have been made really effective by specifically prohibiting a railroad from holding stock in a company mining or producing articles which were to be transported by the railroad

¹ *Cong. Record*, June 25, 1906, p. 1901.

² *Ibid.*, June 28, 1906, p. 9522.

in interstate commerce. The changes made in conference relieving all common carriers except railroads from the provisions of the clause might also have met with more opposition, had not Congress been anxious to secure the speedy passage of the bill.

But when the principle of the clause rather than its phraseology is considered, it should be noted that as far back as 1892, a Congressional Committee, after an extended investigation, came to the conclusion that the public interest demanded that the business of a common carrier should be absolutely separated from any other.¹ This also was the consensus of opinion in the Senate in 1906, though later in the course of the debate some Senators objected to carrying the principle so far as to affect the interests of their own constituents. Furthermore, the Interstate Commerce Commission, in its report upon the bituminous coal industry early in 1907, — a report based upon hearings early in 1906, — favored the application of the commodity clause principle to the soft coal roads, and even went so far as to recommend that no officers or employees of a railroad be permitted to have any interest in any coal properties or coal companies along the line of the railroad.² The far-reaching character of the legislation was frequently emphasized in the debates in the Senate. The fact, furthermore, that the railroads were given two years in which to comply with the law is evidence that the Senators believed that fundamental changes would be rendered imperative by the passage of the clause.

The anthracite coal-carrying roads may be divided into three groups, according to the manner in which they would presumably be affected by this enactment. First, the Delaware, Lackawanna and Western, and the Delaware and Hudson, which mined their coal directly. Second, the Lehigh Valley, the Central Railroad of New Jersey, the Erie, the Pennsylvania, and the New York, Ontario and Western, which seemed to be interested, indirectly at least, in the coal transported by them, because of their ownership of the stock of coal mining companies. The Delaware, Lack-

¹ *House Report*, 1892-93, no. 2278, p. viii.

² *Annual Report I. C. C.*, 1907, p. 22.

awanna and Western, and the Delaware and Hudson also owned stock in some coal companies, but these holdings, especially in the case of the Lackawanna, were very small. Third, the Philadelphia and Reading Railway, which did not own any coal lands directly, or even the stock of a coal mining company, but which was with the Philadelphia and Reading Coal and Iron Company jointly owned by the Reading Company. This assured perfect harmony between the railroad and the coal company, but has made more difficult the judicial determination whether the railway has an interest in the coal transported by it in violation of the commodity clause.

Compliance with the commodity clause on the part of the anthracite railroads was more difficult in most cases than might appear at first glance. It is true that the Lackawanna Railroad, whose coal property was unmortgaged, could have sold its coal lands, and the Pennsylvania Railroad, which held its stock in coal mining companies free of encumbrance, could have disposed of its shares. But the situation in the case of the other carriers was more complex. In most cases the railroads had mortgaged their coal lands as security for long term bonds. These mortgages had been placed directly upon the land where the land was directly owned, and upon the stock of the coal companies where the land was owned by a subsidiary coal company. In the case of the Delaware and Hudson, for example, all of its coal bearing lands in Pennsylvania, together with all its railroads in Pennsylvania north of Scranton, were subject to the lien of a mortgage securing \$5,000,000 bonds maturing in 1917. These liens were upon both the railroad and the coal property.¹ The Lehigh Valley, the Erie, the Central of New Jersey, and the Reading, on the other hand, had mortgaged the stocks of their principal coal companies to secure the bonds issued by the respective railroads. For example, the Lehigh Valley had deposited the stock of the Lehigh Valley Coal Company, of the Hazelton Coal Company, and of several other companies, as part security for its General Consolidated Mortgage, executed September 30, 1903, under which bonds to the amount of \$23,539,000 had been issued, which were outstand-

¹ *Transcript of Record in Commodity Clause Cases*, p. 12. See Biblio. no. 160.

ing in the hands of the public. There was an absolute inhibition in the mortgage against releasing the stocks of the Lehigh Valley Coal Company and the Hazelton Coal Company from the operation of the indenture, and the stocks of the other coal companies could not be released from the lien, unless their alienation, in the opinion of the trustee, would not be detrimental to the security of the bonds.¹ The general mortgage of the Reading Company also contained an inhibition against any separation of the railroad and the coal properties. The two mortgages of the Erie Railroad, secured in part by the deposit of the stock of the Hillside Coal and Iron Company and of the Pennsylvania Coal Company, contained no provision for a release of the stocks pledged.² The general mortgage of the Central Railroad of New Jersey, secured in part by the bonds and stocks of the Lehigh and Wilkes-Barre Coal Company, did make provision for releasing the property pledged, providing no objection to the release was made by the trustee.³

In every case where the coal properties had been mortgaged the bonds were secured by both the railroad and the coal properties. The mortgage debt of the railroads which had thus pledged their railway and coal properties aggregated over \$400,000,000 and most of the bonds had long terms to run. The existence of these mortgages presented a real difficulty in any separation of the railroads and their coal lands. This separation was likely to meet with considerable opposition from bondholders, who would fear a diminution of their security because of the danger that part of the coal tonnage might be shipped over another railroad.

Because of these difficulties, which were accentuated by the panic of 1907 and the resulting depression, and because it was believed that the commodity clause would be held by the courts to be unconstitutional, practically no effort was made by the principal coal roads to comply with the law. The Buffalo, Rochester and Pittsburgh, a soft coal road, attempted to reorganize in such a way as to comply with the law without running any

¹ *Transcript of Record in Commodity Clause Cases*, pp. 19, 23 *et seq.* See Biblio. no. 159.

² *Transcript of Record in Commodity Clause Cases*, p. 16, *et seq.* See Biblio. no. 161.

³ *Transcript of Record in Commodity Clause Cases*, pp. 9-10, 15-18, 41. See Biblio. no. 162.

risk of losing its coal tonnage. It organized the Mahoning Investment Company, and transferred to this company for a nominal consideration the coal lands of the railroad. It then distributed the shares of the Investment Company pro rata among its stockholders.¹ The profits on the mining of coal thus went directly to the stockholders of the railroad, without passing through the hands of the railroad itself. The Louisville and Nashville and a few other roads succeeded in disposing of their coal properties. The attempts to comply with the law, however, were few in number and were confined mainly to the soft coal roads.

The seriousness of the situation, largely because of the enormous fines which a violation of the clause would entail, was sufficiently realized by the Government. The Department of Justice announced in the middle of January, 1908, that proceedings would be brought as soon as possible after the clause went into effect, but that meanwhile the railroads were not to be prosecuted for a failure to comply with the terms of the act, provided they coöperated with the Government and immediately in good faith obeyed the decision of the Supreme Court when rendered.² Somewhat later an effort was made in the Senate to postpone the operation of the clause. On the 31st of March, 1908, Senator Elkins introduced a Joint Resolution to suspend the commodity clause. As amended by the Committee on Interstate Commerce to which it had been referred, this resolution provided for a suspension of the penalties of the clause until January 1, 1910, but the instituting of proceedings for the enforcement of the clause was not to be affected in any way. Consideration of the measure was taken up by the Senate on April 28, 1908. Its passage was urged by Senator Elkins on the ground that the railroads had tried to make the necessary financial arrangements, but had been unable to do so, because of the panic of 1907. He urged that it was only fair to suspend the clause until the law could be tested.³

The Joint Resolution had the support of the Interstate Commerce Commission. In a letter to the Senate dated April 2, 1908, this body, without stating its reasons, urged the passage of

¹ *Chron.*, 85: 373 (1907).

² *Chron.*, 86: 227 (1908).

³ *Cong. Record*, April 28, 1908, p. 5331, and May 1, 1908, p. 5533.

the resolution.¹ In response to a request of the Senate directing it to state its reasons, the Commission replied (May 8) that the financial depression had produced conditions presumably not anticipated when the clause was enacted. The enforcement of the clause now would, in its opinion, work considerable hardship, particularly on the independent coal operators, who were mining coal from lands leased from the Pocahontas Coal and Coke Company, owned by the Norfolk and Western Railroad, and who were shipping their product over this line. The railroad, according to the counsel of the Interstate Commerce Commission, was unable to dispose of its coal lands, and consequently could not carry the coal of the independent operators. The Commission, therefore, favored a suspension of the penalties until January 1, 1910, in order to give the courts time to test the validity of the clause.²

On the 13th of May, Senator Foraker, who had taken a prominent part in the debate, introduced a substitute amendment, which provided that the clause should "not apply to any article or commodity lawfully acquired and owned prior to the 29th day of June, 1906, by any railroad company under and by virtue of any statute, franchise, or charter lawfully issued by the United States or any State or Territory thereof."³ On account of his illness a vote on this amendment was not taken until May 22. On that date it was defeated by 23 to 32, — 37 not voting.⁴ On the 4th of January, 1909, the resolution of Senator Elkins came up again for consideration, but was laid aside for several successive days, and after January 11, 1909, apparently was not taken up again.

But meanwhile, on May 1, 1908, the commodity clause had gone into effect. On the 5th of June, 1908, the Government began its suit against the anthracite carrying railroads by filing in the Circuit Court for the Eastern District of Pennsylvania bills of equity and alternative writs of mandamus against the Philadelphia and Reading, the Lackawanna, the Delaware and Hudson, the Lehigh Valley, the Central of New Jersey, the Erie and the

¹ *Cong. Record*, May 1, 1908, p. 5533.

² *Ibid.*, May 13, 1908, pp. 6193-6194.

³ *Ibid.*, May 13, 1908, p. 6202.

⁴ *Ibid.*, May 22, 1908, p. 6754.

Pennsylvania. The suit against the Reading, however, was not pressed, as its interest in the coal transported by it was less direct than was that of the other railroads; the Government attempted to secure a decision first upon the other cases. It was charged in these proceedings that certain of the defendant railroads were directly engaged in mining operations, and others indirectly engaged through the ownership of the capital stock of subsidiary coal companies, and that all the railroads were transporting the coal so mined in interstate commerce in violation of the commodity clause.¹

The first decision in the Circuit Court, September 10, 1908, was against the government. That court (Justice Buffington dissenting) held the commodity clause to be "a practical violation of the letter and spirit of the fifth amendment,"² and intimated further that it was not within the commerce clause of the constitution, since entire exclusion from interstate commerce was not to be deemed a regulation of it.³

An appeal was at once taken to the Supreme Court, which rendered its decision⁴ on May 3, 1909, less than a year after the original suit had been brought. The clause was declared to be within the power of Congress.⁵ The Supreme Court held that the commodity clause "applies four generic prohibitions, that is, it forbids a railroad carrier from transporting in interstate commerce articles or commodities, 1, which it has manufactured,

¹ 164 *Fed. Rep.* 217.

² The enforcement of the act, the Court held, "will compel the defendants to cease mining and transporting such coal, while still retaining their ownership or interest therein, . . . or, they will be compelled to surrender and divest themselves of title thereto by a compulsory sale of these coal lands and stock in coal companies. When we consider the magnitude of the sacrifice that must certainly attend such a sale, from throwing upon the market at once these properties, . . . it will be manifest that either alternative means a deprivation of property of enormous value by the mere command of the statute, without process of law or just compensation therefor."

³ The text of the decision is in 164 *Fed. Rep.* 217 *et seq.* See especially pp. 226, 229, 232, and (for the dissenting opinion) 252-254.

⁴ 213 *U. S.* 366-419.

⁵ An interpretation was put upon the commodity clause by the Supreme Court which made it unnecessary to pass upon the constitutional questions raised by the Circuit Court; but these constitutional questions presumably will come up again before the Supreme Court for final determination.

mined or produced; 2, which have been so mined, manufactured or produced under its authority; 3, which it owns in whole or in part; and, 4, in which it has an interest, direct or indirect.”¹ The Court noted that the first two prohibitions, if literally construed, operated upon the right to transport a commodity because of an antecedent act of manufacturing or mining, whereas the last two prohibitions spoke in the present, referring to ownership at the time of the transportation of the commodity. Should the first two be held to prohibit, irrespective of the relation of the carrier to the commodity at the time of transportation, and should the last two only prohibit ownership at the time of transportation, the result would be, said the Court, to give the statute a semi-annihilative meaning. It treated these four prohibitions, however, “as having a common purpose, that is, the dissociation of railroad companies prior to transportation from articles or commodities, whether the association resulted from manufacture, mining, production or ownership, or interest, direct or indirect.”² The Supreme Court noted that the first two prohibitions were radical and the last two more reasonable. It restrained, therefore, the wider and more doubtful prohibitions in order to make them accord with the narrower and more reasonable ones, which provided for dissociation at the time of transportation. A railroad was not, therefore, it was held, forbidden to transport articles which had been mined by it or which it had previously owned, provided it had dissociated itself from these articles prior to the act of transportation.

It might, however, be held that some of the railroads had an “interest,” direct or indirect, in the coal transported by them, even though it had not been directly mined or owned by them at any time prior to the act of transportation. The Supreme Court, therefore, proceeded to analyze the nature of the interest, direct or indirect, which was prohibited by the commodity clause and which it had interpreted to refer only to an interest at the time of transportation. The Government had contended that since the statute referred to *any* interest, direct or indirect, it prohibited the transportation of commodities, mined by a *bona fide* corpora-

¹ 213 U. S. 408.

² *Ibid.*, p. 412.

tion in which the carrier held a stock interest, however small. The contention of the railroads, on the other hand, had been that interest included only commodities in which the carrier had a legal interest, and did not prohibit the transportation of commodities mined by a separate corporation in which the transporting carrier held stock. The Supreme Court held that, if the interest referred to meant a legal or equitable interest, the mere ownership of stock in a distinct corporation did not prohibit a carrier from transporting in interstate commerce articles mined by that corporation. It was admitted by the prosecution that this would follow were the clause to be interpreted to mean a legal interest. The question in dispute, then, was this: did the interest mentioned in the act refer merely to a legal interest? The Government maintained that the term interest should be interpreted broadly, including such as is involved in the ownership of stock in a subsidiary coal company. If interest were to be taken to mean merely a legal one, the commodity clause would be without significance. The Court held, however, that this was not true. It pointed out that the Senate had rejected an amendment which specifically provided that interest, direct or indirect, was intended among other things to embrace an interest resulting from ownership of stock. The failure, held the Court, to provide for this contingency in express language gave rise to the implication that it was not the purpose to include it.

At all events, in view of the far-reaching consequences of giving the statute such a construction as that contended for, . . . and of the questions of constitutional power which would arise if that construction were adopted, we hold the contention of the Government not well founded. We then construe the statute as prohibiting a railroad company engaged in interstate commerce from transporting in such commerce articles or commodities under the following circumstances and conditions: (a) When the article or commodity has been manufactured, mined or produced by a carrier or under its authority, and at the time of transportation the carrier has not in good faith before the act of transportation dissociated itself from such article or commodity; (b) When the carrier owns the article or commodity to be transported in whole or in part; (c) When the carrier at the time of transportation has an interest, direct or indirect, in a legal or equitable sense in the article or commodity, not including, therefore, articles or commodities manufactured, mined, produced or owned, etc., by a *bona fide* corporation in which the railroad company is a stockholder.¹

¹ 213 U. S. 414-415.

Justice Harlan held, in a dissenting opinion, that the act, reasonably and properly construed, included within its prohibitions the transportation of coal by a railroad company, if, at the time, it were the owner, legally or equitably, of stock — certainly if it owned a majority or all the stock — in the company which mined, manufactured or produced, and then owned, the coal which was being transported by the railroad company. Any other view of the act, he held, would enable the transporting railroad company, by one device or another, to defeat altogether the purpose which Congress had in view, which was to divorce, in a real, substantial sense, production and transportation, and thereby to prevent the transporting company from doing injustice to other owners of coal. Justice Harlan did not present any argument sustaining his dissenting opinion. He deemed it unnecessary to do more than express his non-concurrence, inasmuch as the cases had been determined wholly on the construction of certain parts of the act which Congress could revise if it deemed it desirable.

The rejection by Congress of an amendment specifically providing that the ownership of stock in a subsidiary corporation constitutes such an interest as is forbidden by the commodity clause, implied, the Supreme Court held, that Congress did not intend to prohibit the ownership by railroads of stock in coal mining companies. A bill to make the clause more effective in this respect was introduced in the House of Representatives by Mr. Wanger of Pennsylvania on the 13th of May, 1909, only ten days after the decision of the Supreme Court. This bill, which provided specifically that the ownership of the stock of a subsidiary corporation should be held to constitute an interest (either direct or indirect) in the product of that corporation, was referred to the Committee on Interstate and Foreign Commerce. It seems, however, never to have emerged from committee. In the following year, toward the close of the debates on the Mann-Elkins Act, an attempt was made by Senator Bailey of Texas (who had taken a prominent part in framing the commodity clause of the Hepburn Act) to secure the adoption of an amendment which would clearly prohibit stock ownership. In connection with this subject Senator Bailey remarked that in the light of

the Supreme Court decision the prohibitions as to interest, direct or indirect, could have been improved by specifically providing that the ownership of stock in certain corporations should bring the common carrier within the terms of the statute. But, he said, "I did not . . . think that necessary, because I was familiar with that line of decisions which have almost uniformly held that a stockholder in a corporation has an interest which disqualifies him as a juror in the trial of any case to which the corporation is a party."¹ Senator Bailey said that he believed he could demonstrate, the Supreme Court to the contrary notwithstanding, that the commodity clause, as originally adopted by Congress, was understood to mean in the debate exactly what was proposed by his present amendment.² His amendment was defeated, however, after a brief discussion, by 25 to 31, — 36 not voting.³ Another amendment, not so far-reaching, introduced by Senator Crawford of South Dakota, was rejected without a roll call.⁴

The Supreme Court, as we have seen, declared the commodity clause constitutional. Its interpretation of the clause, however, appeared to render it ineffective. The Circuit Court had held that the enforcement of this clause would make it necessary for the anthracite carrying railroads either to cease transporting coal to other states,⁵ or to divest themselves of all title or interest, direct or indirect, in their coal properties, by a compulsory sale of their coal lands and their stocks in coal companies. The Supreme Court adopted, however, an entirely different interpretation. It held that the "interest" referred simply to a "legal" interest and that a railroad, therefore, could not be said to be interested, either directly or indirectly, in the mining of coal, merely because it owned all the capital stock of a coal company which conducted the mining operations. This interpretation appeared to require but slight changes in the conduct of the coal business, as most of the railroads did not mine coal directly, but merely owned the stock of coal mining companies. The only anthracite railroads

¹ *Cong. Record*, June 1, 1910, p. 7212.

³ *Ibid.*, June 1, 1910, p. 7218.

² *Ibid.*, June 1, 1910, p. 7210.

⁴ *Ibid.*, June 2, 1910, p. 7252.

⁵ Except, of course, the coal transported for independent producers.

which seemed to have any "legal" interest in the coal transported by them, and which were, therefore, affected by the decision, were the Lackawanna and the Delaware and Hudson, both of which mined coal directly. These roads proceeded at once to reorganize their affairs.

The Lackawanna took advantage of that part of the decision of the Supreme Court which held that a railroad might carry in interstate commerce an article mined by it, provided it had in good faith, before the act of transportation, dissociated itself from the commodity so mined. The Lackawanna continued to mine coal, and to transport it in interstate commerce, but it endeavored to dissociate itself from the coal prior to the act of transportation by selling it to another company. On August 1, 1909, the sales division of the Coal Department of the railroad was discontinued, and the Delaware, Lackawanna and Western Coal Company, with a capitalization of \$6,590,700, was organized under the laws of New Jersey.¹ On August 2 a contract was made with the coal company, whereby the railroad agreed to turn over to the coal company its present stock of coal, and to sell all the coal thereafter to be mined or purchased by the railroad for a certain per cent of the tide-water price, — the basis being that generally prevailing in the anthracite region.² The control of the coal company was vested in the same hands as was the control of the railroad, its stock being purchased by shareholders of the railroad, with funds provided by the railroad. Though paying unusually large dividends, the Lackawanna had for several years been accumulating a large surplus. The organization of the coal company offered a good opportunity for distributing some portion of this surplus. A stock dividend of 15 per cent was declared (apparently in violation of the express prohibitions of its charter), and in addition an extra dividend of 50 per cent payable in cash. Stockholders of the railroad were then given the option of using one-half of this extra dividend to purchase at par stock in the newly organized

¹ *Annual Report of the Lackawanna Railroad*, 1909, p. 10.

² Contract between the railroad and the coal company. See original petition in *U. S. v. D. L. and W. R. R. Co., and the D. L. & W. Coal Co.*, in the District Court of the United States for the District of New Jersey. Referred to hereafter as *Original Petition in Lackawanna Case*.

coal company.¹ This option was generally exercised, and as a result the stockholders of the two companies became practically identical, and harmonious relations were assured. The president and one of the vice-presidents of the railroad have from the beginning been two of the seven directors of the coal company, and this vice-president has regularly been the president of the coal company.² Under this arrangement, however, it was possible that through the sale of the stock of one or the other of the two companies this community of interest might in time be dissolved. The danger that any conflict of interest would thus arise, which might jeopardize the future traffic of the railroad, has been obviated by the ingenious provision that the contract between the railroad and the coal company is terminable upon six months' notice by either party.³ By such a device the coal company became in reality a mere subsidiary selling agency of the railroad.⁴

The operations of this new concern have proved to be highly profitable. From almost the very beginning it has paid 10 per cent dividends, and in 1913 it declared an extra dividend of 20 per cent,⁵ while at the same time it was building up an enormous surplus.

The Delaware and Hudson, like the Lackawanna, was directly engaged in the mining of coal, but it had for several years sold all of its larger sizes of coal at the mines, prior to the act of transportation. This practice had not been followed, however, for the smaller sizes. As the result of the decision of the Supreme Court the railroad, on June 1, 1909, made a contract with the Hudson Coal Company, all of whose stock was owned by the railroad, whereby the coal company agreed to buy at the pit mouth all the coal produced from the mines belonging to the railroad.⁶ The Delaware and Hudson, therefore, resorted to the same scheme for

¹ *Annual Report of the Lackawanna Railroad*, 1909, p. 11.

² *Original Petition in Lackawanna Case*, p. 14.

³ Contract in *Original Petition in Lackawanna Case*, p. 33.

⁴ The coal company agreed to purchase all the coal offered by the railroad, and no other, unless necessary to comply with contracts then outstanding, and it has always leased all the necessary trestles and storage plants from the railroad. Contract in *Original Petition in Lackawanna Case*, pp. 27-30.

⁵ *Chron.*, 96: 949 (1913).

⁶ *Annual Report of the Delaware and Hudson Company*, 1909, p. 9.

dissociating itself from the coal transported by it as had been followed by the Lackawanna, except that the organization of a special company to purchase the coal was unnecessary, as the railroad already owned the stock of a subsidiary, which could be used for that purpose. It remains, however, to be judicially determined whether the Delaware and Hudson has, in good faith, dissociated itself from the coal prior to the act of transportation, as the railroad owns the total capital stock of the coal company offering its product to the railroad for shipment.

The interpretation put upon the commodity clause by the Supreme Court in 1909 gave little ground for assuming that the legislative prohibitions would materially affect the anthracite coal situation. A case recently decided by the Supreme Court, however, indicates that the commodity clause may yet prove more effective than was commonly supposed, and that some further changes in the conduct of the business may be necessary. The Supreme Court, after rendering its decision on the constitutionality of the commodity clause, remanded the case to the Circuit Court for such further proceedings as might be necessary to enforce the statute as it had been interpreted. The Government thereupon amended its original bill against the Lehigh Valley.¹ In the second petition it was charged by the prosecution that though the Supreme Court had held that stock ownership by a railroad company in a *bona fide* corporation did not make it illegal for the railroad to transport in interstate commerce commodities mined by this corporation, yet the Lehigh Valley Coal Company was not a *bona fide* mining corporation, but a mere agency or department of the railroad. This being the case, the railroad had at the time of transportation an interest, in a legal sense, in the coal thus transported and had not, therefore, in good faith dissociated itself from the ownership of the coal. Evidence was introduced to show that the Lehigh Valley Railroad used the coal company as a mere device to enable it to evade the prohibitions of the commodity clause.² The Circuit Court, however, on March 7, 1910,

¹ The Government did not amend its bills against the other railroads, regarding the Lehigh Valley suit as a test case.

² 220 U. S. 268-270.

denied the request of the United States for leave to file the amended bill, and upon motion of the railroad counsel dismissed the bill absolutely.¹ The Government appealed from this decree to the Supreme Court, which, on April 3, 1911, rendered a decision reversing the lower court. The Supreme Court in a discussion of the legal points involved sharply criticized the Circuit Court for its refusal to permit the Government to file the amended bill. We are concerned here, however, primarily with the opinion of the Court as to the relation of the coal company to the railroad. In the words of the Court, "While this decision [the decision in the commodity clause case] expressly held that stock ownership by a railroad company in a *bona fide* corporation, irrespective of the extent of such ownership, did not preclude a railroad company from transporting the commodities manufactured, mined, produced or owned by such corporation, nothing in that conclusion foreclosed the right of the Government to question the power of the railroad company to transport in interstate commerce a commodity manufactured, mined, owned or produced by a corporation in which the railroad held stock and where the power of the railroad company as a stockholder was used to obliterate all distinctions between the two corporations."² The Supreme Court held that the facts averred "tended to show an actual control by the railroad company over the property of the coal company and an actual interest in such property beyond the mere interest which the railroad company would have had as a holder of stock in the coal company."³ It was further held that the use of stock ownership in another corporation for the purpose of destroying the entity of the corporation and commingling its affairs with the affairs of the railroad, so as to make the two companies virtually one, brings the railroad company so acting within the prohibitions of the commodity clause.⁴

The Supreme Court, therefore, remanded the case for a determination of the fact whether the Lehigh Valley Coal Company was or was not a department of the railroad. In accordance with this ruling, the Circuit Court permitted the filing of an amended

¹ 220 U. S. 270.

² *Ibid.*, pp. 271-272.

³ *Ibid.*, p. 272.

⁴ *Ibid.*, p. 274.

complaint. The Government thereupon filed in the Circuit Court at Philadelphia on the 6th of June, 1911, a bill against the Lehigh Valley Railroad, charging as before that the various coal companies owned by the railroad were not *bona fide* concerns, but mere devices for evading the commodity clause. Without waiting for the decision of the Court, the Lehigh Valley effected a readjustment of its affairs. On January 22, 1912, the Lehigh Valley Coal Company secured the incorporation, under the laws of New Jersey, of a new corporation, the Lehigh Valley Coal Sales Company, with an authorized capital stock of \$10,000,000, of which \$6,060,800 was issued upon the organization of the company. On March 1, 1912, the Lehigh Valley Coal Company entered into a contract with the Coal Sales Company, whereby the latter was to purchase, ship, and sell the coal mined, or otherwise acquired by the Coal Company.¹ On the same day in which the Lehigh Valley Coal Company authorized the organization of the Coal Sales Company, the Lehigh Valley Railroad declared a special ten per cent cash dividend,² which could be used for subscriptions to the stock of the newly organized corporation. The railroad, therefore, in effect provided its shareholders with funds, with which they could (and they generally did) purchase the stock of the new company without any expense to themselves. The result was that the stockholders of the railroad and of the Coal Sales Company became practically identical. In addition, the officers and directors of the Coal Sales Company were chosen largely from among the officers and directors of the railroad and of the Coal Company. Of the seven directors of the Sales Company, one is a vice-president of the railroad, another is a son of a director of the railroad, and a third, who is also president of the Sales Company, was, until the formation of the latter company, a director of the railroad. The danger that such close relations might eventually be broken up has been warded off, as was done by the Lackawanna, by a provision that the contract between the Sales Company and the Coal Company (owned by the railroad) is terminable upon the option of either party upon six months'

¹ *Annual Report of the Lehigh Valley Coal Company*, 1912, p. 6.

² *Ibid.*, p. 14.

notice. As the main asset of the Coal Sales Company is its contract for the purchase of the coal of the Lehigh Valley Coal Company, such a provision would seem to assure continued good relations.¹

The profits of the newly organized Sales Company have been enormous. Since October 21, 1912, it has regularly paid quarterly dividends of 2½ per cent, and in November, 1913, less than two years after its organization, it declared an extra cash dividend of 25 per cent, and at the same time gave subscription privileges, which amounted to a 25 per cent stock dividend. In addition, the company had accumulated by December 31, 1913, a surplus of \$1,134,847.

These various devices of the anthracite companies for bringing their affairs into compliance with the commodity clause have been recently attacked by the Government. On February 13, 1913, it brought suit against the Delaware, Lackawanna and Western Railroad, and the Delaware, Lackawanna and Western Coal Company, charging that the mere organization (in 1909) of a coal company to purchase the coal mined by the railroad did not divest the railroad of all interest in the coal transported by it, as required by the commodity clause. The newly organized coal company, it was claimed, must always be subservient to the will of the railroad and those who control it. The stockholders of the railroad have constituted the dominant stockholders of the coal company, and probably always will. They elect its officers, determine its policies, and, moreover, they may take away its sole business upon six months' notice. If its conduct shall fail to meet with their approval, it may be deprived of all benefits under the sales contract, and its business quickly destroyed. In such event a similar subterfuge could be organized, and the profits of the entire business be secured by the stockholders of the railroad.² The Government further charged that the contract between the

¹ As in the contract between the Lackawanna Railroad and its coal company, the Lehigh Valley Coal Sales Company agreed to purchase all the coal offered by the Coal Company, and no other, unless necessary to comply with contracts then outstanding; and it has likewise leased from the Coal Company all the necessary yards, and storage and selling facilities.

² *Original Petition in Lackawanna Case*, p. 20.

railroad and the coal company is in restraint of trade, and an attempt to monopolize the coal business along the railroad's lines in violation of the Sherman Anti-Trust Act.

A decision ¹ in this case was rendered by the Circuit Court on April 7, 1914. This Court held that since it had been determined by the Supreme Court that a *railroad* ² might own stock in a *bona fide* coal company without offending against the commodity clause, clearly no offense was committed when the *stockholders* ³ of a railroad subscribed to the stock of a coal company. In the words of the lower court, "no Act of Congress or judicial decision has declared it to be illegal for an individual citizen to invest his money in two enterprises, merely because the enterprises may be closely connected." ³ The only qualification which the Supreme Court had imposed was that the company in which the railroad held stock must be a *bona fide* corporation; the railroad must not use the power given by such ownership of stock to destroy the entity of the subsidiary corporation. The Circuit Court, however, found no evidence that the Delaware, Lackawanna and Western Railroad or its dominating stockholders had erred in this respect. Rather the evidence was that the railroad and the newly organized coal company were becoming more and more distinct. Though at the outset the stockholders of the two companies were nearly identical, by October, 1913, the shares of the railroad not interested in the coal company had increased from 2,249 to 88,716; and the shares of the coal company not interested in the railroad had increased to 6,907. The Circuit Court concluded, therefore, "that the transactions between the two companies began and have been carried on in good faith, in obedience to the decisions of the Supreme Court, . . . and that the two [companies] are not one for all purposes [as is charged by the government], but are two distinct and separate legal beings, actually engaged in separate and distinct operations. It follows that the

¹ U. S. v. D. L. and W. R. R. Co., and D. L. and W. Coal Co., in the District Court of the United States for the District of New Jersey, pp. 1-46.

² Italics supplied by the author.

³ *Decision of Circuit Court*, p. 27. This decision, should it be sustained by the Supreme Court, will clearly have an important bearing upon the larger problem of trust dissolution.

railroad does not own the coal in question, either in whole or in part, during its carriage, but it has in good faith dissociated itself therefrom before the beginning of the act of transportation.”¹ The suit of the government was therefore dismissed. The Circuit Court rendered no opinion as to whether the railroad and the coal company had entered into a contract or combination in restraint of trade in violation of the Sherman Anti-Trust Act; it explained that the oral argument had left the Court under the impression that this charge was not much insisted upon by the government. An appeal from the above rulings is now pending in the Supreme Court.

The government has likewise brought action against the Reading Company and its allied railroads and coal companies. On September 2, 1913, some months prior to the above decision, the government filed in the District Court of the United States for the Eastern District of Pennsylvania a bill against the Reading Company, the Philadelphia and Reading Railway, the Philadelphia and Reading Coal and Iron Company, the Central Railroad of New Jersey, the Lehigh and Wilkes-Barre Coal Company, the Lehigh Coal and Navigation Company and three minor railroads, and nine individual defendants. The petition recited numerous acts and relations which were declared to constitute combinations in restraint of trade in violation of the Sherman Anti-Trust Law, and further to constitute violations of the commodity clause of the Hepburn Act.²

It was such prosecutions as these, doubtless, which influenced the Pennsylvania Railroad to yield to public opinion, and to avoid the danger of further conflicts along this line with the Government. Within a very few weeks after the above-mentioned action against the Reading Company had been instituted, the president of the Pennsylvania Railroad announced that the directors of his company had decided to sell the securities held by the railroad in the Susquehanna Coal Company and other anthracite mining companies.³ In order, however, to insure the continued

¹ *Decision of Circuit Court*, p. 41.

² *Original Petition in Reading Case*, pp. 1-3, 69-75.

³ *Chron.*, 97: 887 (Sept. 27, 1913).

operation of the unprofitable as well as the profitable mines and to insure thereby the railroad's future traffic, and in order to assure itself of a market for all its coal lands, the ownership of the various anthracite properties is first being compacted into the Susquehanna Coal Company.¹ The purchaser of this company, or the plan of sale, has not yet (April, 1914) been announced.

A decision in the above-mentioned suit² against the Lehigh Valley Railroad and the Lehigh Valley Coal Company charging violation of the commodity clause was not rendered by the Circuit Court. Apparently the organization of the Lehigh Valley Coal Sales Company made the bringing of a new action seem advisable. At any rate, the earlier suit, by the consent of both parties, was dismissed by the Circuit Court without prejudice on January 27, 1913.³ This, however, was but the prelude to the bringing of a new bill. On March 18, 1914, a suit was filed in the District Court of the United States for the Southern District of New York against the Lehigh Valley Railroad, the Lehigh Valley Coal Company, the Lehigh Valley Coal Sales Company, and other allied companies, as well as against a number of individuals. As in the earlier proceedings against the Delaware, Lackawanna and Western, and against the Reading, violation of both the Sherman Anti-Trust Act and of the commodity clause was charged. With respect to the commodity clause, it was maintained that the transportation by the Lehigh Valley Railroad of coal mined by the Lehigh Valley Coal Company was a violation of the clause, as the coal company was not a *bona fide* corporation but a mere department of the railroad. It was likewise maintained that the organization of the Lehigh Valley Coal Sales Company did not constitute a compliance with the commodity clause, but rather a device of evasion. It was claimed that the Lehigh Valley Coal Sales Company must always be subservient to the will and direc-

¹ *Annual Report of the Pennsylvania Railroad*, 1913, pp. 14-15. Some such consolidation was suggested as far back as 1899, but vigorous objection to the plan was made by the vice-president of the coal companies. For his most interesting letter to the assistant to the president of the Pennsylvania Railroad, see Appendix, Letter VII.

² See p. 207.

³ *Chron.*, 96: 360 (1913).

tion of those who control the railroad. Such persons constitute its dominant stockholders (the majority stockholders of the railroad own 80 per cent of the shares of the Sales Company), they elect its officers, and they determine its policies. With minor exceptions, the Coal Sales Company can buy its coal from no one but the Lehigh Valley Coal Company, from which company it leases all of its yards, and storage and selling facilities. In short, so it was claimed, the two corporations are but instrumentalities of substantially the same group of stockholders. The Government prayed, therefore, that the transportation of anthracite coal by the railroad for the Coal Sales Company be enjoined, so long as the stockholders of the railroad constitute also the controlling stockholders of the Coal Sales Company.¹

Even should the government prove successful in its contention that the Lehigh Valley Coal Company, which mines the coal, is but a mere department of the railroad, the claim has been made by the railroad that the Coal Company has disposed of its coal to the Coal Sales Company, and that "neither the Lehigh Valley Railroad nor the Lehigh Valley Coal Company has any ownership in the stock of the Sales Company or any interest, direct or indirect, in the coal transported."² Unless then our courts shall hold that a railroad does have an 'interest' in coal offered for transportation by a company whose stockholders are the same as those of the railroad, it is obvious that the commodity clause must be made more specific, if the underlying principle is to be applied with any considerable degree of success.

Coincidentally with these cases involving an alleged violation of the commodity clause, the Government was conducting a prosecution of certain anthracite coal roads and their subsidiary coal companies for violation of the Sherman Anti-Trust Act. On the 12th of June, 1907, the Department of Justice instituted in the Circuit Court for the Eastern District of Pennsylvania a suit to dissolve the combination in the anthracite coal business. In the petition of the Government it was charged that the defendants at

¹ *Original Petition in Lehigh Valley Case*, pp. 69, 73, 79.

² *Annual Report of the Lehigh Valley Railroad*, 1912, p. 13.

some time since 1892 had entered into a combination or conspiracy general in scope, by which they restrained and monopolized the anthracite coal trade. In the development of this general combination, it was charged, a number of contributory acts had been committed, each of which was in itself in restraint of trade. These unlawful acts were the purchase of the New York, Susquehanna and Western by the Erie, the defeat through the Temple Iron Company of an attempt to build an independent road to tide-water, the purchase of the Pennsylvania Coal Company and its allied railroads and the consequent abandonment of a second independent outlet, the purchase of the Central of New Jersey by the Reading Company, and, finally, the signing of the uniform percentage contracts.¹

The original defendants in the suit may be divided into three groups. (1) The Reading Company (the holding company); (2) the Philadelphia and Reading Railway, the Central of New Jersey, the Lehigh Valley, the Lackawanna, the Erie, and the New York, Susquehanna and Western; (3) the respective coal companies of the railroads, including the Temple Iron Company, jointly owned by the six defendant railroads.² The Delaware and Hudson, the Pennsylvania and the Ontario were not made defendants, as they had not combined with the other roads to purchase the stock of the Temple Iron Company, and had not participated in any of these separate steps in the development of the combination. They had, it is true, signed contracts with the individual operators, but these in no case contained the perpetuity clause, which was typical of the contracts signed by the defendants. After all of the original defendants had filed their answers, the United States on October 17, 1907, amended its original petition by bringing in the individual operators,³ who, by the signing of the percentage contracts, had placed the railroad coal companies in control of their output, and by including, in addition, the trustees for the mortgages of the Reading Company and the

¹ *Brief for the United States in the Sherman Anti-Trust Case*, pp. 6, 9-13. See Biblio. no. 156.

² *Ibid.*, pp. 6-7.

³ Including the Delaware and Hudson Company, which sold a part of its output under contract to the Hillside Coal and Iron Company.

Erie Railroad, who held legal title to the stock of the Central of New Jersey, and of the New York, Susquehanna and Western respectively, the acquisition of which the Government held to be unlawful.¹

The Circuit Court rendered its decision ² on December 8, 1910, three separate opinions being handed down. The charge that the defendants had entered into a general combination or conspiracy was unanimously dismissed; and it was unanimously agreed that the purchases of the New York, Susquehanna and Western, the Central of New Jersey, and the Pennsylvania Coal Company were not unlawful acts, Judge Gray holding that if no general agreement was disclosed, it was hardly worth while to consider at great length the separate steps in the development of the combination. The court also dismissed the charge that the percentage contracts were an unlawful step in the development of the combination. From this portion of the decision Judge Buffington dissented. He held that by means of the contracts articles which had previously entered into competitive interstate commerce had been withdrawn from such competition, and that an instrument which brought about this result was a combination in restraint of trade. The only contention of the Government that was sustained by this court was the charge that the railroads had unlawfully combined through the Temple Iron Company to prevent the building of a proposed independent railroad. In this connection Judge Buffington held that if the combination of the railroads through the Temple Iron Company was not illegal, there was no legal bar to the railroads, through this company, absorbing all the anthracite coal not now owned by the subsidiary coal companies of the railroads. He held that the railroads had made the Temple Iron Company an instrument to enable them jointly to combine in restraint of trade.

From the decision of the Circuit Court an appeal was taken to the Supreme Court. The Government appealed from that part of the decree dismissing its charges, and the defendants prosecuted

¹ *Brief for the United States in the Sherman Anti-Trust Case*, p. 16. See Biblio. no. 156.

² 183 *Fed. Rep.* 427-497.

two separate appeals — one by the Temple Iron Company and the other by the Reading Company and the defendant railroads — from that part of the decree adjudging that they were joined in an unlawful combination through the Temple Iron Company.

The Supreme Court rendered its decision on December 16, 1912.¹ In regard to the charge that there existed a general combination, the Court unanimously held (three judges not participating) that the case was “barren of *documentary*² evidence of solidarity.” The fact of a general combination, if it exists, must be deduced, the Court held, from specific acts or transactions in which the companies have united. The Court held that the Government had failed in its attempt to show any contract or agreement between the defendant carriers to distribute the total tonnage of coal according to a definite scale of percentages. The Supreme Court also dismissed the charge that the purchases of the New York, Susquehanna and Western, the Central Railroad of New Jersey, and the Pennsylvania Coal Company were unlawful acts in furtherance of the illegal plan of a general combination. “So far as this record shows not one of these transactions was the result of any general combination between all of the defendants.”³ And if these transactions “did not constitute any part of any general plan or combination entered into by all the carrier companies, their separate consideration as independent violations of the act of Congress is not admissible under the general frame of this bill.”⁴ As to the legality of these three minor combinations (that is, the purchases of the New York, Susquehanna and Western, the Central Railroad of New Jersey, and the Pennsylvania Coal Company), the Court expressed no opinion, but directed that the bill, in so far as it sought relief against them, be dismissed, without prejudice.

The Supreme Court upheld the lower court in adjudging the combination through the Temple Iron Company to be an unlawful combination. This company, the Court held, had been used as the instrument whereby a proposed independent railroad —

¹ 226 U. S. 324-373.

³ 226 U. S. 372.

² Italics supplied by the author.

⁴ *Ibid.*

the New York, Wyoming and Western — was successfully “strangled,” and the monopoly of transportation collectively held by the six defendant carrier companies was maintained. The Court characterized as narrow the view that since the New York, Wyoming and Western had been effectively strangled, it would be idle to enjoin the doing of an act already accomplished. It held that “the combination by means of the Temple Company still exists. It has been and still is an efficient agency for the collective activities of the defendant carriers for the purpose of preventing competition in the transportation and sale of coal in other States. . . . Through it, the defendants, in combination, may absorb the remaining output of independent producers. The evil is in the combination.”¹ It was held that the board of directors of the Temple Iron Company, “composed as it is of men representing the defendants, supplies time, place and occasion for the expression of plans or combinations requiring or inviting concert of action.”²

The Supreme Court reversed, however, the decree of the Circuit Court sustaining the percentage contracts. It recited the persistent attempts of the operators to secure an independent outlet to tide-water, first through the New York, Wyoming and Western Railroad, and later through the Delaware Valley and Kingston Railroad. These persistent attempts offered a constant menace to the monopoly of transportation enjoyed by the defendants. For the railroads to renew the contracts for short terms would but postpone the day of competition. The obvious solution was perpetual contracts. The Court was not surprised that the railroads were willing to offer more favorable terms than heretofore, as these perpetual contracts would remove forever the inducement to the entry of competing lines of anthracite carriers, and would remove, also, the coal of the independents from competition with the coal of the defendants. Upon this aspect of the case, the Court agreed with Judge Buffington, of the Circuit Court, who had held, in a dissenting opinion, that “there is no more subtle and effective agency for the gradual, unnoted absorption by interstate carriers of the remaining interstate product

¹ 226 U. S. 352-353.

² *Ibid.*, p. 353.

than these perpetual contracts.”¹ To suppress competition through the percentage contracts would require, however, concerted action, as the attempt of a few to secure the independent coal would have been resisted by those not included. The Court held that the defendants had so acted in concert with the intent and design of controlling the sale of the independent output, and thus preventing competition with their own coal. The Supreme Court remanded the case with direction to enter a decree cancelling each of these contracts, and perpetually enjoining their further execution.

In accordance with the decree of the Supreme Court the perpetual contracts for the sale of coal have been terminated,² and the coal properties of the Temple Iron Company have been sold. The directors of the Temple Iron Company announced on May 1, 1914, that the company had sold the stock of its eight coal companies to Mr. S. B. Thorne.³ The final decree of the court had provided that the purchaser of the properties of the Temple Iron Company must be a *bona fide* purchaser, not one in privity with or sustaining any relation in interest, direct or indirect, to any of the earlier defendants.⁴ The purchaser was at one time general manager of the Temple Iron Company.⁵

The Supreme Court had expressed no opinion as to the legality of the purchase of the Central Railroad of New Jersey by the Reading Company, or the purchase of the New York, Susquehanna and Western Railroad and the Pennsylvania Coal Company by the Erie. It had dismissed the bill without prejudice, in so far as it sought relief against these minor combinations, intimating that the proper method of procedure would be to bring independent action against these minor combinations. The Government, therefore, on September 2, 1913, as noted above,⁶ brought suit against the Reading Company and its allied railroads

¹ 183 *Fed. Rep.* 475.

² In two cases at least the railroad coal company still buys coal from the individual operators, but not under a perpetual contract. See *Decision of Circuit Court*, U. S. v. D. L. and W. R. R. Co., p. 38; and *Original Petition in Lehigh Valley Case*, p. 36.

³ *Chron.*, 98: 1465 (1914).

⁵ *Chron.*, 98: 1465 (1914).

⁴ *Chron.*, 98: xiii, (April 11, 1914).

⁶ See p. 210.

and coal companies, charging that the purchase of the Central Railroad of New Jersey by the Reading Company in 1901 constituted an act in restraint of trade in violation of the Sherman Anti-Trust Act. Mention has likewise been made, in connection with the commodity clause litigation, of the proceedings recently instituted against the Lackawanna, the Central of New Jersey, the Lehigh Coal and Navigation Company, and the Lehigh Valley, charging violation of the Sherman Act. Action may also be brought against the Erie Railroad, charging that the purchase of the New York, Susquehanna and Western and of the Pennsylvania Coal Company were illegal under the Sherman Act, and that the transportation by the railroad of the coal mined by its subsidiary companies constitutes a violation of the commodity clause. Whether or no this particular suit be brought, the end of litigation is clearly not yet.

CONCLUSION

THE Government, thus, is endeavoring to effect the dissolution of the anthracite coal combination, both on the ground that the anthracite railroads are offending against the commodity clause of the Hepburn Act, and also on the ground that they are a combination in restraint of trade in violation of the Sherman Anti-Trust Act.

As to the principle of the commodity clause, there was, as we have seen, substantial agreement in the debates preceding the passage of the Hepburn bill. Even Senator Foraker, one of the three senators who finally voted against the bill, expressed himself in favor of the principle of the commodity clause, saying that he did not believe that a common carrier should be engaged in any business except that of a common carrier. However, the attempt of the Government to apply this principle to the anthracite railroads has met with little success, because of the interpretation put upon the commodity clause by the Supreme Court. But even though further Supreme Court decisions should restore vitality to the clause, so that in other industries it may be thoroughly enforced, it must be said that it is extremely doubtful whether in the anthracite industry competitive conditions would be thereby restored. The railroads or their subsidiary coal companies now own or control over 90 per cent of the annual output of anthracite coal, and they own in fee simple an even larger percentage of the yet unmined coal. Were the coal companies to be separated from their present railroad control, the result, in all probability, would be either the organization of a coal trust, or an agreement of some kind among the coal companies to restrict output or to fix prices.

The Government has also been unsuccessful thus far in securing "documentary evidence" of the existence of a general combination among the anthracite railroads in violation of the Sherman Anti-Trust Act. But even though, through further remedial

measures, the dissolution of the combination should be finally effected, it would be exceedingly difficult (in view of the concentration within a few hands of substantially the entire supply of anthracite coal) to prevent the formation of an entente cordiale among the companies which would effectively maintain prices and yet be less open to attack.

In either case, therefore, further regulative measures presumably would be attempted. Just what these measures would be, or should be, is bound up in the larger problem of public ownership of the natural resources of the country versus private ownership under public regulation — a far-reaching problem concerning which the people of the United States have not as yet a fixed and definite policy. And until a definite policy is adopted, a permanent solution of the anthracite coal problem is not to be expected.

APPENDIX

STATISTICAL TABLES

LETTERS

APPENDIX

STATISTICAL TABLES

TABLE I. ANNUAL SHIPMENTS OF ANTHRACITE COAL FROM THE SCHUYLKILL, LEHIGH AND WYOMING REGIONS, 1820-1913, IN LONG TONS ¹

Year	Total Quantity	Schuykill Region Percentage	Lehigh Region Percentage	Wyoming Region Percentage
1820	365	....	100.00	....
1821	1,073	....	100.00	....
1822	3,720	39.79	60.21	....
1823	6,951	16.23	83.77	....
1824	11,108	14.10	85.90	....
1825	34,893	18.60	81.40	....
1826	48,047	34.90	65.10	....
1827	63,434	49.44	50.56	....
1828	77,516	61.00	39.00	....
1829	112,083	71.35	22.40	6.25
1830	174,734	51.50	23.90	24.60
1831	176,820	46.29	23.17	30.54
1832	363,271	57.61	19.27	23.12
1833	487,749	51.87	25.22	22.91
1834	376,636	60.19	28.21	11.60
1835	560,758	60.54	23.41	16.05
1836	684,117	63.16	21.66	15.18
1837	869,441	60.98	25.75	13.27
1838	738,697	60.49	28.92	10.59
1839	818,402	58.05	27.01	14.94
1840	864,379	56.75	26.07	17.18
1841	959,773	65.07	14.90	20.03
1842	1,108,412	52.62	24.59	22.79
1843	1,263,598	56.21	21.19	22.60
1844	1,630,850	54.45	23.12	22.43
1845	2,013,013	56.22	21.33	22.45

¹ *Mineral Resources*, 1912, pt. 2, pp. 196-197.

TABLE I (continued)

Year	Total Quantity	Schuylkill Region Percentage	Lehigh Region Percentage	Wyoming Region Percentage
1846	2,344,005	55.82	22.07	22.11
1847	2,882,309	57.79	21.98	20.23
1848	3,089,238	56.12	21.70	22.18
1849	3,242,966	53.30	24.10	22.60
1850	3,358,899	54.80	20.56	24.64
1851	4,448,916	52.34	21.68	25.98
1852	4,993,471	52.81	21.47	25.72
1853	5,195,151	51.30	20.29	28.41
1854	6,002,334	53.14	20.13	26.73
1855	6,608,567	53.77	19.43	26.80
1856	6,927,580	52.91	19.52	28.47
1857	6,644,941	50.77	19.84	29.39
1858	6,839,369	47.86	20.18	31.96
1859	7,808,255	44.16	20.86	34.98
1860	8,513,123	44.04	21.40	34.56
1861	7,954,264	39.74	21.85	38.41
1862	7,869,407	42.86	17.17	39.97
1863	9,566,006	40.90	19.80	39.30
1864	10,177,475	40.89	20.19	38.92
1865	9,652,391	45.14	21.14	33.72
1866	12,703,882	45.56	17.15	37.29
1867	12,988,725	39.74	19.27	40.99
1868	13,801,465	38.52	18.13	43.25
1869	13,866,180	41.66	14.06	44.28
1870	16,182,191	30.70	20.02	49.28
1871	15,699,721	41.74	14.24	44.02
1872	19,669,778	34.03	19.70	46.27
1873	21,227,952	33.97	17.46	48.57
1874	20,145,121	34.09	18.73	47.18
1875	19,712,472	31.87	14.38	53.75
1876	18,501,011	33.63	20.84	45.53
1877	20,828,179	39.35	20.80	39.85
1878	17,605,262	35.68	18.40	45.92
1879	26,142,689	34.28	17.58	48.14
1880	23,437,242	32.23	19.05	48.72
1881	28,500,017	32.46	18.58	48.96
1882	29,120,096	32.48	19.54	47.98
1883	31,793,027	31.69	19.23	49.08
1884	30,718,293	30.85	18.11	51.04
1885	31,623,530	30.01	18.65	51.34

TABLE I (continued)

Year	Total Quantity	Schuylkill Region Percentage	Lehigh Region Percentage	Wyoming Region Percentage
1886	32,136,362	29.19	17.89	52.82
1887	34,641,018	30.63	12.55	56.82
1888	38,145,718	27.93	14.78	57.29
1889	35,817,093	29.28	17.57	53.15
1890	36,615,459	29.68	17.28	53.04
1891	40,448,336	31.50	15.78	52.72
1892	41,893,340	30.14	15.40	54.46
1893	43,089,537	28.68	15.99	55.33
1894	41,391,200	29.08	16.20	54.72
1895	46,511,477	30.68	15.69	56.63
1896	43,177,485	30.34	15.03	54.63
1897	41,637,864	29.26	15.00	55.74
1898	41,899,751	28.83	14.92	56.25
1899	47,665,204	29.79	14.45	55.76
1900	45,107,484	29.94	15.33	54.73
1901	53,568,601	29.92	13.45	56.63
1902	31,200,890	27.15	11.12	61.73
1903	59,362,831	27.75	12.07	60.18
1904	57,492,522	28.49	12.36	59.15
1905	61,410,201	28.83	12.78	58.39
1906	55,698,595	28.75	12.65	58.60
1907	67,109,393	30.01	12.41	57.58
1908	64,665,014	27.85	12.04	60.11
1909	61,969,885	27.21	12.16	60.63
1910	64,905,786	27.49	13.29	59.22
1911	69,954,299	27.70	13.97	58.33
1912	63,610,578	28.32	13.47	58.21
Total	1,882,961,263	31.59	15.50	52.91
1913	69,069,628	28.00	13.53	58.47

These shipments include only coal loaded on cars for line or tide points, and do not include any coal sold locally nor at present the shipments from the Bernice field in Sullivan County.

TABLE II. ANTHRACITE SHIPMENTS BY THE INITIAL RAILROADS, 1871 TO 1913.¹ ooo Omitted

Roads	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
P. & R.	5,330	5,645	5,868	5,568	4,782	4,931	6,842	5,112	7,442	5,933	6,940	7,000	7,420	6,541	6,716	6,697	7,555	7,175	7,128	7,527	8,601	8,191
C. R. R.	1,985	2,253	2,698	2,706	2,465	2,778	2,837	2,264	3,825	3,470	4,085	4,211	4,819	4,327	4,964	4,903	4,852	5,742	6,021	5,615	5,857	5,271
L. V.	2,880	3,850	4,121	3,989	3,285	3,985	4,447	3,403	4,405	4,394	5,721	5,933	6,271	5,935	6,107	6,184	5,784	6,592	6,504	6,768	7,220	6,944
Lacka.	1,730	2,520	2,952	2,353	2,833	1,998	2,089	2,180	3,867	3,550	4,388	4,638	5,079	5,204	4,987	5,172	6,220	6,906	5,502	5,792	6,198	6,529
D. & H.	1,955	2,882	2,732	2,290	2,843	1,809	1,787	2,046	3,014	2,674	3,211	3,203	3,512	3,362	3,301	3,480	4,048	4,486	3,812	3,764	3,939	4,058
Penn. R. R. ...	912	1,168	1,519	1,642	1,772	1,623	1,530	1,362	1,682	1,864	2,211	2,332	2,773	3,169	3,393	3,478	3,816	4,554	3,884	4,017	4,994	5,571
Penn. Coal Co.	848	1,266	1,297	1,396	1,426	1,143	1,118	957	1,427	1,138	1,475	1,499	1,541	1,397	1,500	1,398	1,003	1,624	1,335	1,428	1,962	1,921
Erie.	55	83	36	197	303	230	175	278	477	411	465	330	382	484	651	731	759	974	1,217	1,029	1,204	1,338
Ont. ....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	695	807
D. S. & S. ....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	43	1,210
Total.	15,699	19,669	21,227	20,145	19,712	18,591	20,828	17,605	26,142	23,437	28,500	29,120	31,793	30,718	31,623	32,136	34,641	38,145	35,407	35,865	40,448	41,893
Roads	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
P. & R.	8,338	8,289	9,095	9,019	8,395	8,219	9,683	9,338	10,971	5,909	11,490	11,399	12,574	11,258	14,018	12,578	11,920	12,445	13,265	12,852	12,914	
C. R. R.	5,503	4,847	5,388	4,999	4,730	4,626	6,372	5,309	6,160	3,629	7,404	7,201	7,983	6,983	8,714	8,495	7,938	8,519	9,218	8,342	9,002	
L. V.	6,637	6,424	7,360	6,749	6,425	6,885	7,588	6,909	8,310	4,631	9,737	9,611	10,072	8,536	11,532	10,772	10,296	11,195	12,603	11,791	13,011	
Lacka.	6,887	5,997	6,129	5,627	5,600	5,795	5,392	6,013	7,531	5,152	9,575	9,333	9,554	9,201	10,237	10,088	9,531	9,589	9,869	9,065	9,903	
D. & H.	4,361	3,997	4,347	4,152	3,921	3,891	4,132	3,973	5,007	3,090	5,927	5,276	5,640	5,346	6,562	6,461	6,136	6,578	7,206	6,361	7,094	
Penn. R. R.	5,848	4,727	5,025	4,752	4,767	4,801	5,158	5,169	5,647	2,610	4,555	4,765	4,890	4,856	6,203	6,019	5,966	6,250	6,494	5,548	6,351	
Penn. Coal Co.	1,804	1,705	1,746	1,728	1,777	1,854	2,347	2,090	...	...	...	...	...	...	...	...	...	...	...	...	...
Erie.	1,369	1,669	1,820	1,718	1,669	1,596	1,949	1,741	5,841	3,814	6,343	5,711	6,225	5,636	7,151	7,450	7,461	7,554	8,800	7,435	8,192	
Ont.	1,160	1,372	1,434	1,335	1,620	1,371	1,891	1,658	2,558	1,627	2,693	2,646	2,864	2,444	2,689	2,798	2,717	2,772	2,495	2,213	2,509	
D. S. & S.	1,088	1,633	1,905	1,700	1,324	1,555	1,694	1,568	1,590	735	1,634	1,546	1,605	1,435	...	...	...	...	...	...	...
N. Y. S. & W. ....	...	726	1,492	1,390	1,314	1,301	1,454	1,333	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.	43,089	41,391	46,511	43,177	41,637	41,899	47,665	45,107	53,568	31,200	59,362	57,492	61,410	55,698	67,109	64,665	61,966	64,995	69,954	63,610	69,069	

¹ These figures were collected by a confidential accountant of the railroads. They may be found prior to 1887 in the Annual Report of the Geological Survey of Pennsylvania, 1886, Part III, Anthracite Region, p. 1042, and since 1887 in the trade journals, such as Seward's Coal Trade.

² Due to the omission of the last three figures the total slightly exceeds the sum of the figures here given.

TABLE III. MONTHLY SHIPMENTS OF ANTHRACITE COAL, 1896-1913¹

Month	ooo Omitted								
	1896	1897	1898	1899	1900	1901	1902	1903	1904
Jan.	3,844	2,854	3,073	3,761	4,482	5,192	4,538	5,964	4,134
Feb.	2,603	2,519	2,761	2,810	3,188	4,123	3,741	5,070	4,326
March	2,998	2,540	2,700	3,416	3,133	5,002	3,818	5,211	4,375
April	3,013	2,552	2,228	3,078	3,364	3,715	4,924	5,044	5,407
May	3,125	2,723	2,399	3,557	3,833	4,693	1,708	5,156	5,285
June	3,314	2,920	3,026	4,073	4,676	4,792	92	5,436	5,728
July	3,750	3,975	3,777	4,189	3,599	3,699	259	5,377	4,623
August	3,949	4,086	3,783	4,319	4,951	4,711	321	5,169	4,325
Sept.	4,001	4,072	4,260	4,502	2,972	4,379	445	4,654	3,967
Oct.	4,783	5,120	4,136	4,899	834	4,938	1,276	3,925	5,131
Nov.	4,435	4,538	4,854	4,688	4,994	4,697	4,984	4,091	5,124
Dec.	3,357	3,732	4,274	4,502	5,075	3,623	5,099	4,259	5,063
Total	43,177	41,637	41,899	47,665	45,107	53,568	31,200	59,362	57,492

Month	1905	1906	1907	1908	1909	1910	1911	1912	1913
Jan.	4,408	5,458	5,249	5,618	5,183	5,306	5,904	5,763	6,336
Feb.	3,922	4,712	4,563	4,503	4,576	5,031	5,070	5,875	5,674
March	5,258	5,797	5,235	4,766	6,332	5,174	5,996	6,569	4,909
April	5,278	488	5,916	5,987	5,891	6,224	5,804	266	5,966
May	6,005	3,254	5,994	6,088	5,063	5,679	6,317	1,429	5,995
June	5,844	5,676	5,976	5,704	4,904	5,398	6,215	6,191	5,970
July	4,546	4,981	5,669	4,541	4,020	4,202	4,804	6,285	5,487
August	5,041	5,400	5,795	4,599	4,198	4,996	5,531	6,576	5,369
Sept.	5,082	4,527	5,512	5,211	4,116	4,967	5,730	5,876	5,572
Oct.	5,205	5,384	6,108	5,977	5,579	5,622	6,269	6,665	6,338
Nov.	5,421	5,182	5,743	5,839	6,027	6,071	6,193	6,165	5,786
Dec.	5,395	4,836	5,343	5,827	5,775	6,231	6,115	5,944	5,662
Total	61,410	55,698	67,109	64,665	61,969	64,905	69,954	63,610	69,069

¹ Seward's Annual Coal Trade.

TABLE IV. AVERAGE WHOLESALE PRICES PER LONG TON ACTUALLY RECEIVED
BY THE DELAWARE AND HUDSON CANAL COMPANY FOR LACKAWANNA (WYOMING)
COAL, ALL SIZES, LUMP TO PEA INCLUSIVE, F.O.B. NEW YORK, 1869-1893 ¹

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ave.
1869	...	...	...	...	...	...	...	...	...	...	...	...	\$5.78
1870	6.15	4.93	4.76	4.64	3.72	4.19	5.48	5.63	5.79	5.20	5.07	5.04	5.39
1871	6.28	6.94	5.55	3.47	...	3.98	5.30	4.92	5.22	5.51	4.56	4.74	5.33
1872	4.19	3.94	3.82	3.54	3.81	3.51	3.76	3.56	3.79	4.21	4.10	3.92	3.84
1873	4.34	4.52	4.67	4.36	3.42	4.27	4.98	5.01	4.62	4.94	5.01	4.78	4.76
1874	4.79	5.06	4.64	4.76	5.07	5.13	5.24	5.45	5.53	5.63	5.43	4.95	5.19
1875	5.04	5.86	5.23	3.46	4.56	5.01	5.13	5.41	5.38	5.62	5.48	5.15	5.28
1876	5.37	4.93	4.85	4.19	4.70	4.72	4.92	4.05	3.61	3.39	3.47	3.22	4.11
1877	3.03	2.98	2.60	2.94	2.89	2.55	2.58	2.80	3.01	2.67	2.30	1.92	2.44
1878	2.05	2.70	3.21	3.25	3.49	3.33	3.63	3.68	3.65	3.75	3.65	2.96	3.15
1879	2.69	2.46	2.42	2.27	2.21	2.34	2.38	2.21	2.16	2.13	2.65	2.81	2.34
1880	2.98	2.91	3.25	3.60	3.79	3.76	3.83	3.87	3.97	3.90	3.94	3.95	3.73
1881	3.99	4.04	3.95	3.86	3.78	3.75	3.80	3.79	3.83	3.78	3.75	3.99	3.84
1882	3.72	3.60	3.57	3.62	3.62	3.70	3.64	3.71	3.81	3.98	4.04	3.87	3.73
1883	3.68	3.68	3.61	3.62	3.61	3.68	3.65	3.67	3.63	3.71	3.70	3.48	3.65
1884	3.47	3.56	3.44	3.35	3.27	3.44	3.42	3.29	3.36	3.29	3.42	3.43	3.41
1885	3.14	3.30	3.31	3.28	3.22	3.09	3.11	3.05	2.99	3.23	2.99	2.90	3.12
1886	2.88	2.69	2.66	2.58	2.51	3.44	2.53	2.74	2.83	2.88	2.97	3.10	2.75
1887	3.29	3.45	3.51	3.24	3.16	3.98	3.27	3.35	3.57	3.62	3.63	3.92	3.51
1888	3.90	3.90	3.59	3.69	3.39	3.36	3.60	3.64	3.74	3.72	3.46	3.37	3.65
1889	3.34	3.12	3.09	2.96	3.09	3.25	3.31	3.52	3.32	3.44	3.25	3.22	3.25
1890	3.18	3.11	3.15	3.07	3.05	3.07	2.92	2.97	3.17	3.24	3.15	3.22	3.13
1891	3.23	3.05	3.11	2.87	2.86	2.95	2.79	2.89	3.18	3.07	3.09	2.99	3.03
1892	2.98	2.99	3.15	3.23	3.19	3.15	2.94	2.93	3.18	3.00	2.99	3.23	3.09
1893	3.54	3.25	3.11	2.96	2.98	2.99	2.98	2.78	2.96	3.10	3.09	3.11	3.11

¹ *Mineral Industry*, iv, p. 184.

TABLE V. APPROXIMATE DISTRIBUTION OF THE CONSUMPTION OF ANTHRACITE COAL BY STATES IN 1899¹

TOTAL SHIPMENTS IN 1899, 47,665,203 LONG TONS

Pa.....	13,803,253	Nebr.....	149,850
N. Y.....	12,503,896	S. C.....	41,288
N. J.....	4,693,500	Ga.....	36,662
Mass.....	3,994,859	Kans.....	20,842
Ill.....	2,188,294	Ky.....	19,425
Md. & D. C.....	1,252,832	La.....	16,000
Conn.....	1,185,882	Texas.....	12,949
Wisc.....	942,599	N. C.....	11,262
Ohio.....	672,370	Cal.....	9,368
Me.....	633,490	Tenn.....	6,760
Mich.....	592,094	Ore.....	4,000
R. I.....	553,495	Wash.....	2,500
Minn.....	518,163	N. & S. Dak.....	2,000
Vt.....	405,095	Ala.....	1,500
N. H.....	370,810	Okla.....	893
Mo.....	318,316	Miss.....	535
Va.....	305,700	Ark.....	500
Del.....	249,405	West Va.....	366
Iowa.....	237,456	Mont.....	200
Ind.....	198,998	Exports.....	1,707,796

TABLE VI. MAIN PROVISIONS OF THE EARLY AGREEMENTS

	Character of Tonnage Regulated	Amount	Output Percentages	Prices	Board of Control
1873	To comp. points only	No limit set	Definite percentages adopted	Schedule of prices agreed upon	Empowered to change the amount shipped to tide and prices
1876	Same		Penalty attached for violation of percentages		
1878	All tonnage			Determination of prices left to each company but sales agents to meet in one room	
1885	Same as 1878	Total pro- duction agreed upon	No penalty	Agreement silent as to prices	Empowered to deter- mine the proportion of the total to be pro- duced in each month
1886	Same	Agreement upon total	A penalty but no guarantee	Advance of 25 cents a ton	
1896	Same	Amount left to sales agents		Left to sales agents	Empowered to serve in advisory capacity to sales agents

¹ 22nd Annual Report of the U. S. Geological Survey, pt. 3, p. 103.

TABLE VII. HIGH AND LOW QUOTATIONS OF THE COMMON STOCK OF EIGHT ANTHRACITE COMPANIES, 1898-1913 ¹

	1898	1899	1900	1901	1902	1903	1904	1905
Reading Company	{ \$23 $\frac{5}{8}$ 15 $\frac{1}{2}$	{ \$25 15 $\frac{1}{2}$	{ \$26 15	{ \$58 24 $\frac{1}{2}$	{ \$78 $\frac{1}{2}$ 52 $\frac{1}{4}$	{ \$69 $\frac{1}{4}$ 37 $\frac{1}{2}$	{ \$82 $\frac{5}{8}$ 38 $\frac{3}{4}$	{ \$143 $\frac{3}{4}$ 79
C. R. R.	{ 99 84 $\frac{1}{2}$	{ 126 $\frac{3}{8}$ 97	{ 150 $\frac{1}{2}$ 115	{ 196 $\frac{5}{8}$ 145 $\frac{3}{4}$	{ 198 165	{ 190 153	{ 194 $\frac{3}{4}$ 154 $\frac{1}{4}$	{ 235 190
L. V. R. R.	{ 52 $\frac{1}{2}$ 35	{ 60 44 $\frac{1}{4}$	{ 61 43 $\frac{3}{4}$	{ 78 $\frac{3}{4}$ 57	{ 77 58 $\frac{1}{2}$	{ 91 $\frac{3}{4}$ 69	{ 119 $\frac{3}{4}$ 67 $\frac{1}{2}$	{ 181 105
Lackawanna.	{ 159 140	{ 194 $\frac{1}{2}$ 157	{ 194 $\frac{3}{4}$ 171 $\frac{1}{2}$	{ 258 188 $\frac{1}{4}$	{ 297 231	{ 276 $\frac{1}{2}$ 230	{ 359 $\frac{3}{4}$ 250 $\frac{1}{2}$	{ 498 $\frac{1}{2}$ 335
D. & H.	{ 114 $\frac{1}{2}$ 93	{ 125 $\frac{3}{4}$ 106 $\frac{1}{2}$	{ 134 $\frac{1}{2}$ 106 $\frac{1}{2}$	{ 185 $\frac{1}{2}$ 105	{ 184 $\frac{1}{2}$ 153 $\frac{1}{2}$	{ 183 $\frac{1}{2}$ 149	{ 190 $\frac{1}{2}$ 149	{ 240 $\frac{3}{4}$ 178 $\frac{1}{2}$
Penn. R. R.	{ 123 $\frac{1}{8}$ 110 $\frac{3}{4}$	{ 142 122 $\frac{1}{4}$	{ 149 $\frac{1}{2}$ 124 $\frac{3}{8}$	{ 161 $\frac{1}{2}$ 137	{ 170 147	{ 157 $\frac{5}{8}$ 110 $\frac{3}{4}$	{ 140 111 $\frac{1}{2}$	{ 148 131 $\frac{1}{2}$
Erie.	{ 16 $\frac{1}{4}$ 11	{ 16 $\frac{1}{4}$ 10	{ 27 $\frac{1}{4}$ 10 $\frac{1}{2}$	{ 45 $\frac{1}{2}$ 24 $\frac{1}{2}$	{ 44 $\frac{5}{8}$ 28 $\frac{5}{8}$	{ 42 $\frac{5}{8}$ 23	{ 41 $\frac{5}{8}$ 21 $\frac{1}{2}$	{ 52 $\frac{1}{4}$ 37 $\frac{1}{2}$
Ontario.	{ 19 $\frac{1}{4}$ 13 $\frac{3}{8}$	{ 28 $\frac{7}{8}$ 18 $\frac{3}{8}$	{ 32 $\frac{1}{4}$ 18 $\frac{1}{4}$	{ 40 $\frac{1}{2}$ 24	{ 37 $\frac{5}{8}$ 25 $\frac{1}{4}$	{ 35 $\frac{1}{4}$ 19	{ 21 $\frac{1}{2}$ 19 $\frac{3}{8}$	{ 64 40 $\frac{3}{8}$

	1906	1907	1908	1909	1910	1911	1912	1913
Reading Company	{ \$164 112	{ \$139 $\frac{1}{8}$ 70 $\frac{1}{2}$	{ \$143 $\frac{1}{4}$ 92 $\frac{1}{4}$	{ \$173 $\frac{3}{8}$ 118	{ \$172 $\frac{1}{4}$ 130 $\frac{5}{8}$	{ \$161 $\frac{7}{8}$ 134	{ \$179 $\frac{1}{4}$ 148 $\frac{1}{4}$	{ \$171 $\frac{1}{2}$ 151 $\frac{5}{8}$
C. R. R.	{ 239 $\frac{7}{8}$ 204	{ 220 144	{ 229 160	{ 323 $\frac{1}{2}$ 215	{ 312 248	{ 320 260	{ 395 305	{ 362 275
L. V. R. R.	{ 172 130	{ 157 $\frac{3}{4}$ 97	{ 153 $\frac{1}{2}$ 105 $\frac{1}{4}$	{ 226 134	{ 242 $\frac{1}{2}$ 125	{ 186 $\frac{7}{8}$ 151	{ 185 $\frac{3}{8}$ 155 $\frac{5}{8}$	{ 168 $\frac{3}{8}$ 141 $\frac{1}{4}$
Lackawanna.	{ 560 437 $\frac{3}{4}$	{ 510 369 $\frac{1}{2}$	{ 575 420	{ 680 535	{ 620 490	{ 570 505	{ 597 530	{ 445 380
D. & H.	{ 234 $\frac{3}{4}$ 189	{ 227 $\frac{1}{2}$ 123 $\frac{5}{8}$	{ 181 $\frac{3}{8}$ 141 $\frac{1}{2}$	{ 200 167 $\frac{3}{4}$	{ 185 149 $\frac{1}{4}$	{ 174 $\frac{7}{8}$ 159 $\frac{1}{2}$	{ 175 $\frac{1}{2}$ 162	{ 167 147 $\frac{1}{2}$
Penn. R. R.	{ 147 $\frac{1}{2}$ 122 $\frac{1}{2}$	{ 141 $\frac{3}{8}$ 103 $\frac{1}{2}$	{ 132 $\frac{1}{4}$ 108 $\frac{3}{4}$	{ 151 $\frac{1}{4}$ 126 $\frac{1}{4}$	{ 138 $\frac{1}{2}$ 122 $\frac{1}{4}$	{ 130 $\frac{1}{8}$ 118 $\frac{3}{8}$	{ 126 $\frac{1}{4}$ 119 $\frac{7}{8}$	{ 123 $\frac{1}{4}$ 106
Erie.	{ 50 $\frac{7}{8}$ 38 $\frac{1}{4}$	{ 44 $\frac{1}{4}$ 12 $\frac{1}{4}$	{ 36 12	{ 39 22 $\frac{5}{8}$	{ 34 $\frac{5}{8}$ 19 $\frac{1}{2}$	{ 38 $\frac{3}{8}$ 27 $\frac{1}{4}$	{ 39 $\frac{1}{8}$ 30	{ 32 $\frac{1}{2}$ 20 $\frac{1}{4}$
Ontario.	{ 57 $\frac{1}{4}$ 43 $\frac{3}{4}$	{ 48 $\frac{3}{8}$ 28	{ 47 $\frac{7}{8}$ 29 $\frac{1}{4}$	{ 55 $\frac{5}{8}$ 42 $\frac{1}{4}$	{ 50 38 $\frac{1}{2}$	{ 46 $\frac{7}{8}$ 37 $\frac{3}{4}$	{ 41 $\frac{3}{8}$ 29 $\frac{7}{8}$	{ 33 $\frac{7}{8}$ 25 $\frac{1}{4}$

¹ *Commercial and Financial Chronicle*, quotation supplements.

LETTERS

LETTER I

I. C. C. Investigation of Anthracite Rates, XXV, Hickey Exhs., no. 2. Delaware, Lackawanna and Western Railroad correspondence.

(Copy)

October 29, 1906.

W. H. TRUESDALE, Esq're.,
No. 26 Exchange Place, New York.

DEAR SIR:

Some time ago our traffic officers were requested to revise our tariffs on anthracite coal, in order to comply with the law.

In view of the relation of this Company as a common carrier, to the coal companies owned by it, I am satisfied that further changes are necessary, involving a readjustment of the rate to Weehauken on a \$1.45 basis on prepared sizes, and proportionately on smaller sizes. A tariff has been prepared, a copy of which I enclose, together with a copy of the tariff which was recently filed to take effect on November 1st.

You will observe that no reduction has been made below tariffs already in force, as the tariff of the Pennsylvania Railroad to Perth Amboy on all sizes has been adopted, five cents per ton being added to cover the additional charge for the upper ports, except on Buckwheat No. 3. On this size the tariff rate is the same as that of the Reading and other lines.

The proposed changes are, I believe, absolutely essential in the conditions under which we labor, peculiar possibly to this Company. It would be impossible for the Scranton Coal Company to pay the higher rates and at the same time take care of outstanding obligations.

Before putting the schedule in effect, I have deemed it proper to advise you as to our intention.

Yours, very truly,

T. P. FOWLER.

LETTER II

I. C. C. Investigation of Anthracite Rates, XXV, Hickey Exhs., no. 3. New York, Ontario and Western correspondence.

(Copy)

31st October, 1906.

Confidential.

MY DEAR FOWLER:

I was out on the road all week and have only returned.

I regret exceedingly that you find it necessary to reduce your rate. We have protested against the Pennsylvania's reduction to South Amboy, and hope to get them to change it. I think it very dangerous to change these rates at this time. The Hearst suit has not been decided, and if we, voluntarily, begin to change these rates it will involve, necessarily, all rates to other points.

With the increased cost of operation to the railroads, arising from the increase in wages, higher cost of equipment, materials, and supplies of all kinds, we shall seriously affect our earnings. There is bound to come, in the near future, a falling off in traffic, and you know that when once rates are lowered it is almost impracticable to again advance them.

We shall not reduce the rate; but, of course, if the reduction in your rate interferes with our business, the Coal Company will be compelled to lower the price of coal. I, of course, cannot stand by and not meet, in some form or other, the competition of other companies.

I trust that you will reconsider the matter.

Yours truly,

GEO. F. BAER,
President.

LETTER III

I. C. C. Investigation of Anthracite Rates, XXV, Hickey Exhs., no. 1. Philadelphia and Reading Railway correspondence.

(Copy)

November 1st, 1906.

GEORGE F. BAER, Esq're.,
Reading Terminal, Philadelphia, Pa.

DEAR MR. BAER:

I received, last evening, your letter of the 30th ultimo. It somewhat astonished me because I am unable to look upon the filing of the proposed tariff in the light of a competitive measure and a hostile act, requiring retaliatory measures, such as you intimate might follow.

I assure you that it was not so intended.

It is my firm belief that the present wholesale price of coal is as low as it is possible to make it, having regard to the cost of production and the capital invested. I do not intend that it shall be lowered, if I can prevent it, and there is no reason why any one else should do so, or threaten to do it, but I am convinced that the division of the market price between the producer and transporter, as expressed in tariffs, needs readjustment at once. I use the term "division," because the business since its inception, has been conducted on the basis of percentages (*i.e.* division) and that fact is universally known and has been admitted by both sides in every controversy over rates.

There is never a convenient season to make changes where the crisis that renders the change necessary is reached while public attention is focused on the situation. I wish very much that an adjustment of rate had been made at the time the 65% contracts were entered into, but that opportunity was missed, and the situation is now critical and requires action, because of the stringent provisions of the Hepburn bill and the trend of judicial decisions.

Our present tariff to tidewater looked at from the ton mile basis alone, is relatively low, and I should not feel disposed to reduce it at present, were it not for our relations to our coal companies, and through them, with the 65% contract business.

No company can buy coal on that basis, pay the full tariff rate, and get back out of the coal purchased, its cost.

That I know is true of our own coal companies; I know, also, that it is true of the Lehigh Valley, and as no other Companies get more for their coal, it must be true of all others, in degree less unfavorable, however, to those who have large line trades.

I believe it cannot be denied that, with the exception of the Companies most favorably located for economical mining, there is not a fair profit to the large Companies if the existing tariff is paid.

The last published statements of the Lehigh Valley, and of your own Company, the latter showing a gross business of upwards of \$34,000,000, with only an insignificant return on a portion of the capital invested, during one of the most prosperous years in the coal trade, demonstrate that there is an unfairness in the division.

This Company, until the Hepburn Act took effect, itself purchased, on the 65% basis, all the coal produced on its line, taking as freight the net result of sales.

The Coal Company owned by the Railroad Company now sells its own coal and purchases the coal of the other producers, and is charged

with the tariff rates. It cannot continue to do so and meet its obligations, and I do not propose to swell railroad earnings, while making book assets of uncollectible advances to Coal Companies to make up deficiencies.

I am advised, and have long been of the belief myself, that when the question is presented, the Courts will hold that where the Coal Company and the Railroad Company have a common ownership and control, and the price received for the commodity is less than the cost of delivery, including transportation, that the transaction is a deviation from the tariff rate. Corporate entities and systems of book-keeping will be treated as fictions, or devices in reaching the last analysis.

Let us be honest with ourselves and recognize the fact that times and conditions, and laws too, have changed, and that it is useless to continue arbitrary methods against the force of public, legislative and judicial opinion.

It seems to me only good business policy and judgment that each business, coal and transportation, be put on a safe and sane, self-supporting basis. In our case, the proposed tariff will give the railroad company a fair revenue, more really than it has before received, and the Coal Company will take care of itself as it should.

There is no doubt in my mind that the same result would follow, if the same methods were adopted by others, but I do not assume to suggest that they should, nor is it necessary for them to do so.

That the change in our tariff will have no effect on others, seems quite clear from the fact that the Pennsylvania Company has had a still lower tariff to Perth Amboy in effect for five years, and that the Jersey Central has now openly given a rebate of 15 cents per ton on a considerable portion of its tide-water coal, after having done so quietly for years, as I am told, although with the knowledge of some of its competitors — in neither case has the general situation been affected.

Our business affects but a small portion of the output of anthracite, and unless the larger interests choose to make our action an excuse for a disturbance, there will be none.

It has been suggested that the operators selling on the 65% basis may seize upon our tariff as a pretext for a demand for an increased percentage. I do not believe it. Every one of them has been making money, and knows that the purchasing Company can not now get its money back after paying the tariff. In fact, the basis of their

demand for 65%, was that each Railroad Company, through its Coal Company, was really carrying at less than its tariff, and the independent demanded to be put on at least the same basis. They will consider the change in tariff merely a change in bookkeeping.

I would like to see the whole business put on the basis I have outlined for my own Company, and then more attention given to economy in transportation, in the way of supplying territory by the short route, and stop the gradually increasing custom of bringing coal from the lower regions to tide, and thence by rail to northern inland points. If full tariffs are paid on such shipments, there can be little left for the coal at the mine.

I have written at considerable length, but it seems necessary in order that you may fully realize my position, and the reasons for the action proposed, and in the hope that the apprehension of trouble indicated in your letter may be allayed.

Yours sincerely,

T. P. FOWLER.

LETTER IV

I. C. C. Investigation of Anthracite Rates, XXV, Hickey Exhs., no. 4. Lehigh Valley Railroad correspondence.

(Copy)

LEHIGH VALLEY RAILROAD

NEW YORK, November 14, 1906.

Mr. Jarvis October 31st with correspondence relative to N. Y. O. & W. Ry. commodity tariff No. B — 38, applying on anthracite coal between points on that Road. Respectfully returned to Mr. T. N. Jarvis, Second Vice-President.

In conversation with Mr. T. B. Koons, Freight Traffic Manager of the Central Railroad of New Jersey, he advises that President Baer and President Fowler had a conference and that the latter agreed to drop the proposed tariff making reductions to Weehauken, etc. Mr. Koons also said that President Baer had made known to President Thomas the result of the conference with President Fowler, so I take it nothing further is necessary.

Yours respectfully,

WM. T. GRIER,
Coal Freight Agent.

LETTER V

I. C. C. Investigation of Anthracite Rates, XXV, Hickey Exhs., no. 4. Lehigh Valley Railroad correspondence.

(Copy)

LEHIGH VALLEY RAILROAD

NEW YORK CITY, September 24, 1907.

Mr. T. N. JARVIS, *Second Vice-President*,
Building.

DEAR SIR:

We had a meeting today at which were present:

Mr. W. J. Mullin, G. T. M. of the Delaware and Hudson Company,

Mr. T. B. Koons, F. T. M. of the Central R. R. of N. J.

Mr. E. B. Crosley, C. F. A. of the Philadelphia & Reading Ry.

Mr. J. G. Searles, G. C. F. A. of the Pennsylvania R. R.

Mr. G. A. Bergen, A. G. F. A. of the Erie Railroad,

Mr. Dunbar, representing Mr. J. C. Anderson, T. M., N. Y. Ont. & W. Ry.

Mr. A. B. Wallace, A. G. F. A., Delaware, Lackawanna & Western R. R.

Mr. F. E. Herriman, C. T. M. of the New York Central & Hudson River R. R.

Mr. Wm. T. Grier, C. F. A., Lehigh Valley R. R.

The meeting was called to discuss the action of the Delaware & Hudson in reducing the rates to points on the Rutland Railroad and Central Vermont Railway twenty to forty cents per ton. . . .

Yours respectfully,

WM. T. GRIER,
Coal Freight Agent.

LETTER VI

I. C. C. Investigation of Anthracite Rates, XXVI, Hickey Exhs., no. 10. Delaware and Hudson correspondence.

(Copy)

PHILADELPHIA, PA., October 16, 1907.

L. F. LOREE,
32 Nassau St., New York.

Our Coal Freight Agent informs me that you propose putting in a new tariff to New England points which makes material changes. I trust that nothing of this kind will be done, at least until we can have an opportunity for consultation. . . .

E. B. THOMAS.

LETTER VII

I. C. C. Investigation of Anthracite Rates, XXVI, Hickey Exhs., no. 11.
Pennsylvania Railroad correspondence.

Letter of I. J. Wistar, vice-president of Susquehanna Coal Co., Mineral Railroad and Mining Co., Summit Branch Coal Co., Lykens Valley Coal Co., to Samuel Rea, assistant to the president of the Pennsylvania Railroad, dated February 17, 1899.

Mr. Wistar objects to the proposed consolidation of the above companies into one.

. . . "There are some considerations which would strongly impress me against the policy of effecting such consolidation without some strong motive not now apparent to me, viz.:

First: As regards labor, now involving several thousand persons, it is much easier to deal with a number of comparative small bodies with different interests, than with one large body of organized labor with interests nearly assimilated, and in case of such consolidation we may be sure it will soon be known to, and followed by the persons who make a living out of such labor organizations, without much regard to the real interests of employer or employed."

Second: "We understand the mutual relations of these Companies. Can it be in any way advantageous to us to make them any simpler to be understood by the miners, the general public, or the legislative plunderers. Almost every legislature raises some sort of investigation Committee. At present to meet them we take up that one of our Companies which is slightly or not at all concerned in the subject of investigation, and are thus enabled to give them very clear and explicit testimony. If all our mining and purchasing operations were boiled down into one managing Company, the time of our principal officers would be largely occupied in keeping up with the investigations, inspections, etc. that are the constant subjects of legislative invention, and if their missiles should fail at one point, they might hit at another. Moreover, now that all these inspections have been brought under one chief Inspector (last legislature) if our relations with him should become bad, we might as well stop mining, as present to his axe, one single neck to be chopped off instead of a number. . . ."

Yours truly,

I. J. WISTAR,
Vice-President.

BIBLIOGRAPHY

LIST OF THE PRINCIPAL WORKS CONSULTED

1. Ashburner, Charles A. Brief Description of the Anthracite Coal Fields of Pennsylvania. A paper read before the Engineers' Club of Philadelphia, June 21, 1884.
2. Bannan, Benjamin. *The Miners' Coal Statistical Register*, an annual continuation of Bannan's book on Coal, Iron, and Oil, 1869, 1870, 1872, 1873, 1875. See Biblio. no. 22.
3. Beale and Wyman. Railroad Rate Regulation. 1906.
4. Bishop, Leander J. A History of American Manufactures, 1608-1860, vols. i and ii. Philadelphia, 1866.
5. Board of Trade. *Fourteenth Annual Report* to the Coal Mining Association of Schuylkill County. Pottsville, 1846.
6. Bond, Frank S. An Address to Shareholders of the Philadelphia and Reading Railroad Company, October, 1881.
7. Borda, Eugene, President of the Philadelphia Coal Exchange. Letter to *New York Tribune*, January 20, 1873.
8. Bowen, Ele. The Coal Regions of Pennsylvania. Pottsville, 1848.
9. Bowen, Ele. The McGinnes Theory of the Schuylkill Coal Formation. 1855.
10. *Bradstreet's Magazine*, vols. xxvi-xli.
11. Brown, William H. The History of the First Locomotives in America. New York, 1874.
12. Central Railroad of New Jersey. *Annual Reports*.
13. Chaplin, H. W. The Coal Mines and the Public. 1902.
14. Chapman, I. A. A Sketch of the History of Wyoming. Wilkes-Barre, 1830.
15. Clark, J. A. The Wyoming Valley. Scranton, 1875.
16. Coal Resources of the World. An inquiry made upon the initiative of the Executive Committee of the XII International Geological Congress, Canada, 1913. Edited by William McInnes, D. B. Dowling, and W. W. Leach of the Geological Survey of Canada. In 4 volumes, including an Atlas. Morang and Co., Ltd. Toronto, Canada.

17. *The Coal Trade*, edited by F. E. Saward. An Annual Compendium of Information relative to Coal, 1879-1913.
18. *The Coal Trade Journal*, 1900-1913.
19. *The Commercial and Financial Chronicle*, vols. i-xcviii.
20. Comparative Views of most important Anthracite Collieries in Pennsylvania. Printed by W. F. Geddes, 1835.
21. Conservation of Natural Resources, *American Academy of Political and Social Science*, 1910.
22. Daddow, S. H., and Bannan, Benjamin. Coal, Iron, and Oil. Pottsville, 1886.
23. Daggett, Stuart. Railroad Reorganization. 1908.
24. Delaware and Hudson Company. *Annual Reports*.
25. Delaware, Lackawanna, and Western Coal Company. *Annual Reports*.
26. Delaware, Lackawanna and Western Railroad. *Annual Reports*.
27. *The Black Diamond*, vols. 34-35.
28. Dowling, D. B. *Bulletin Canadian Mining Institute*, no. 15, June, 1911.
29. Durand, E. Dana. "The Anthracite Coal Strike," *Political Science Quarterly*, vol. xxviii, September, 1903.
30. Eighty Years' Progress of the United States. New York, 1861.
31. Ellet, Charles, Jr. The Schuylkill Navigation, Why it pays no Dividends. J. C. Clark & Son, Printers, Philadelphia, 1855.
32. Erie Railroad. *Annual Reports*.
33. Fell, Jesse. A Letter to Jonathan Fell on the Discovery and First Use of Anthracite in the Valley of Wyoming, written December 1, 1826. See *Memoirs of Historical Society of Pennsylvania*, vol. ii, pp. 162-164.
34. Finlay, J. R. The Cost of Mining. New York, 1909.
35. Gowen, F. B. Argument before the Judiciary Committee of the Senate of Pennsylvania, March 30, 1871. Printed by the Leisenring Steam Printing House, Philadelphia, 1871.
36. Gowen, F. B. Letter to the editor of the *New York Tribune*, January 14, 1873.
37. Gowen, F. B. Argument before the Joint Committee of the Legislature of Pennsylvania, appointed to inquire into the affairs of the Philadelphia and Reading Coal and Iron Company and the Philadelphia and Reading Railroad Company. Press of Helfenstein, Lewis & Greene, Philadelphia, 1875.

38. Gowen, F. B. Statement of the Present Condition of The Philadelphia and Reading Railroad Co. and The Philadelphia and Reading Coal and Iron Co. with Plan for their Financial Reorganization, 1880. Jackson Bros., Printers, Philadelphia.
39. Gowen, F. B. Address to the Share and Bondholders of the Philadelphia and Reading Railroad Company, April 23, 1881. Jackson Bros., Printers, Philadelphia.
40. Greene, Homer. Coal and the Coal Mines. 1892.
41. Griffith, William. *The Bond Record*, vol. iv, 1896.
42. Griffith, William. "A Brief Chronology of Anthracite Coal." Reprinted from the *Scranton Truth* of February 24, 1908.
43. Griffith, William, and Conner, Eli T. "Our Anthracite Coal Supply and its Conservation." *Eighth International Congress of Applied Chemistry*, vol. xxiv.
44. Hadley, A. T. Railroad Transportation. 1885.
45. Harris, J. S. Report upon the Coal Lands of the Philadelphia and Reading Coal and Iron Company, 1880. Jackson Bros., Printers, Philadelphia.
46. Harris, J. S. "Our Anthracite Supply and Its Distribution." *Forum*, vol. xiii, April, 1892.
47. Harvey, O. J. Wilkes-Barre, its History, its Natural Resources, its Industries, 1769-1906.
48. *Hazard's Register of Pennsylvania*, vols. i-xvi (1828-1836).
49. Hazard, Erskine. "History of the Introduction of Anthracite Coal into Philadelphia." *Memoirs of the Historical Society of Pennsylvania*, vol. ii, pp. 155-162.
50. History of Scranton. Published by United Brethren Publishing House, Dayton, Ohio, 1881.
51. Hollister, H. History of the Lackawanna Valley. New York, 1857.
52. *Hunt's Merchants' Magazine*, vols. i-iii.
53. *Iron Age*, vols. xlix-xc.
54. Johnson, E. R. Ocean and Inland Water Transportation. 1906.
55. Jones, Chester Lloyd. The Economic History of the Anthracite Tide-water Canals. 1908.
56. Jones, James F. A Short Description of the Pennsylvania Anthracite Coal Field. Philadelphia, October, 1892.
57. Kulp, George B. Coal, its Antiquity, Discovery, and Early Development in the Wyoming Valley. 1890.

58. Lane, John Q., and Pettit, S. W. Argument before the Investigating Committee of the Pennsylvania Legislature, July 28-31, 1875, showing the Illegality and Criminal Conspiracy of the Anthracite Monopoly. A. T. Zeising & Co., Printers, Philadelphia, 1875.
59. Lehigh Coal and Navigation Company. *Annual Reports*.
60. Lehigh Valley Coal Company. *Annual Reports*.
61. Lehigh Valley Railroad. *Annual Reports*.
62. Lewis, W. Draper. "Constitutional Questions involved in the Commodity Clause of the Hepburn Act," *Harvard Law Review*, vol. xxi, June, 1908.
63. McCalmont Brothers & Co., London. Circular to the Stockholders of the Philadelphia and Reading Railroad Company, London, October 31, 1881.
64. Macfarlane, James. The Coal Regions of America. 1875.
65. McMaster, J. B. A History of the People of the United States, vol. ii.
66. *Manual of Statistics*, 1900-1912.
67. Map of the Anthracite Coal Fields of Pennsylvania. Alder and Ruley, Philadelphia, 1908.
68. Marshall, L. C. "The Commodities Clause," *Journal of Political Economy*, vol. xvii, July, 1909.
69. *Memoirs of the Historical Society of Pennsylvania*, vol. i, p. 321. "A Brief Account of the Discovery of Anthracite Coal on the Lehigh," by T. C. James, April, 1826.
70. M'Henry, George. Philadelphia and Reading Railroad Company, its Financial History. Philadelphia, 1881.
71. Miesse, Charles. Points on Coal and the Coal Business. Feese & Ulrich, Publishers, Myerstown, Pa., 1887.
72. *Mineral Industry*, vols. i-xxii.
73. *Mines and Minerals*, vols. xviii-xxxi.
74. *Moody's Magazine*, "The Reading Railroad," vol. v, January, 1908.
75. *Moody's Manual of Corporation Securities*, 1900-1912.
76. *Nation*, "The True History of the Coal Trouble," vol. xii, March 9, 1871.
77. *National Conservation Commission*, Report of, February, 1909. 2nd Sess., 60th Cong., *Senate Doc.*, no. 676.
78. Newspapers of New York, Boston, Philadelphia, and Washington.

79. New York, Laws of, 1823, Ch. 238, p. 305.
80. New York. Report and Proceedings of the Joint Committee of the Senate and Assembly appointed to investigate Trusts (Lexow Report). Transmitted to the New York Legislature, March 9, 1897.
81. New York, New Haven and Hartford Railroad. *Annual Reports*.
82. New York, Ontario and Western Railway. *Annual Reports*.
83. Nicolls, W. J. The Story of American Coals. 1897.
84. *Niles Register*, vols. i-lxxiii.
85. Norris, R. V. Lectures on Coal Mining at Harvard University. 1911.
86. Parker, Edward W. "The Coal Supplies and Coal Production of the United States," *Publications of American Statistical Association*, vol. xiii, June, 1912.
87. Pearce, Stewart. Annals of Luzerne County. Philadelphia, 1860.
88. Pennsylvania, Second Geological Survey. "A Special Report upon the Causes, Kinds and Amount of Waste in Mining Anthracite," by Franklin Platt, January, 1881.
89. Pennsylvania, Second Geological Survey. "First Report of Progress in the Anthracite Coal Regions," by Chas. A. Ashburner, 1883.
90. Pennsylvania, Geological Survey, *Annual Report* of the. 1886. Part III. "Report on the Anthracite Region," by F. A. Hill, Assistant State Geologist.
91. Pennsylvania, Geological Survey. "A Summary Description of the Geology of Pennsylvania," vol. iii, Part I, 1895.
92. Pennsylvania, Commonwealth of. "Report of Commission appointed to Investigate the Waste of Coal Mining," May, 1893.
93. Pennsylvania, Department of Mines, *Annual Reports* of the. 1891-1911.
94. Pennsylvania, Secretary of Internal Affairs, *Annual Reports* of the. Part III, "Industrial Statistics."
95. *Pennsylvania, Laws of*, selected years.
96. Pennsylvania State Railroad Commission. Harry E. Bellis *et al.* v. Philadelphia and Reading Railroad Co. *et al.* Notes of testimony, vols. i-v, pp. 1-1543; also Exhibits.
97. Pennsylvania Supreme Court Decisions.

98. Pennsylvania Railroad. *Annual Reports*.
99. Pettit, S. W. Argument before the Investigating Committee of the Pennsylvania Legislature, 1875. See Lane, John Q.
100. Philadelphia and Reading Railroad. *Annual Reports*.
101. Philadelphia and Reading Railroad Company. Separate Answer in the case of Samuel Jaudon, Thomas Biddle, Robert Ralston, Trustees, v. The Philadelphia and Reading Railroad Co. et al., Court of Common Pleas, In Equity, September Term, 1851, no. 19.
102. *Poor's Manual of Railroads*, 1870-1914.
103. Price, Waterhouse & Company. Report to the Public Service Commission of Pennsylvania upon the cost to the Pennsylvania Railroad Company and the Philadelphia and Reading Railway Company of transporting anthracite coal from the respective mining sections in the eastern part of Pennsylvania to Philadelphia. Submitted January 31, 1914.
104. *Railroad Gazette* — since June, 1909, the *Railway Age Gazette*, — 1873 to 1913.
105. Reading Company. *Annual Reports*.
106. Railroads, A collection of pamphlets on.
107. *Railway World*, vols. xlii-lvii.
108. The Reading Railroad, Its Advantages for the cheap transportation of Coal as compared with the Schuylkill Navigation and Lehigh Canal, by X. Printed by Haswell, Barrington and Haswell, Philadelphia, May, 1839.
109. Ringwalt, J. L. Development of Transportation Systems in the United States. 1888.
110. Ripley, W. Z. "Stock Watering," *Political Science Quarterly*, vol. xxvi, March, 1911.
111. Ripley, W. Z. "The Commodity Clause in Railroad Legislation," *Quarterly Journal of Economics*, vol. xxvi, May, 1912.
112. Roberts, Peter. The Anthracite Coal Industry. 1901.
113. Roberts, Peter. Anthracite Coal Communities. 1904.
114. Roberts, S. W. "Memoir of Josiah White." See *Memoirs of Historical Society of Pennsylvania*, vol. i, pp. 330-331.
115. Roderick, James E., Chief of the Department of Mines, Pennsylvania. Correspondence.
116. Ruley, W. W., Chief of the Bureau of Anthracite Statistics. Correspondence.

117. Saward, F. W., General Manager of the *Coal Trade Journal*. Correspondence.
118. Schuylkill Navigation Company. *Annual Reports*.
119. Sharpless, Isaac. Two Centuries of Pennsylvania History. 1900.
120. Sheafer, P. W. An Address before the students of the Pardee Scientific Department in Lafayette College, delivered September 5, 1872.
121. Sheafer Bros. Diagram of the Progress of the Anthracite Coal Trade of Pennsylvania. Pottsville. Accompanying a paper read by P. W. Sheafer before the *American Association for Advancement of Science*, Saratoga, September 1, 1879.
122. Steele, J. Dutton. Letter to the President of the Philadelphia and Reading Railroad Co. on the Canals and Railroads for transporting Anthracite Coal. Moss, Brother & Co., Philadelphia, 1855.
123. Stoek, H. H., Editor of *Mines and Minerals*, Scranton and Denver. Correspondence.
124. Sweet, S. H. Special Report on Coal. Transmitted to the Legislature of New York, March 15, 1865.
125. Tanner, H. S. A Description of the Canals and Railroads of the United States. New York, 1840.
126. Taussig, F. W. The Tariff History of the United States. 1914.
127. Taylor, George. The Effect of Incorporated Coal Companies upon the Anthracite Coal Trade of Pennsylvania. Pottsville, 1833.
128. Taylor, R. C. Statistics of Coal. Philadelphia, 1848.
129. *United Mine Workers Journal*, 1900-1913.
130. U. S. Bureau of Mines, *Bulletin* 36, 1912. Walter L. Fisher, "Alaskan Coal Problems."
131. U. S. Bureau of Statistics. O. P. Austin, "Coal Trade of the United States," from *Summary of Commerce and Finance*, September, 1902.
132. U. S. Census. Ninth Census, 1870. "Statistics of Wealth, Taxation and Public Indebtedness," p. 764.
133. U. S. Census. Ninth Census, June 1, 1870, vol. iii. "The Statistics of the Wealth and Industry of the United States."
134. U. S. Census. "Report on the Mining Industries of the United States," 1886, pp. 625-640.

135. U. S. Census. "Report on Mineral Industries in the United States," 1890, p. 345.
136. U. S. Census. "Mines and Quarries," 1902, p. 665.
137. U. S. Congressional Investigation. "Labor Troubles in the Anthracite Regions of Pennsylvania, 1887-1888." 2nd Sess., 50th Cong., *House of Representatives Report*, no. 4147.
138. U. S. Congressional Investigation. "Alleged Coal Combination, 1892-1893." 2nd Sess., 52nd Cong., *House of Representatives Report*, vol. i, no. 2278.
139. U. S. Congressional Investigation. "Regulation of Railway Rates." Digest of the Hearings before the Senate Committee on Interstate Commerce, held from Dec. 16, 1904-May 23, 1905. Compiled by Henry C. Adams and H. T. Newcomb, pp. 635-684. Washington, 1906.
140. U. S. Congressional Investigation. "Increase in Prices of Anthracite Coal, 1913." 3rd Sess., 62nd Cong., *House of Representatives Report*, no. 1442.
141. U. S. Congressional Investigation. "Report of Committee to Investigate the Concentration of Control of Money and Credit," 1913. 3rd Sess., 62nd Cong., *House of Representatives Report*, no. 1593 (Money Trust Investigation).
142. U. S. Circuit Court Decisions. *Interstate Commerce Commission v. Philadelphia and Reading Railway Company et al.* Decided June 12, 1903. 125 *Federal Reporter*, pp. 969-973.
143. U. S. Circuit Court Decisions. *United States v. Delaware and Hudson Co.* Decided September 10, 1908. 164 *Federal Reporter*, pp. 215-259.
144. U. S. Circuit Court Decisions. *United States v. Reading Co. et al.* Decided December 8, 1910. 183 *Federal Reporter*, pp. 427-497.
145. U. S. Circuit Court Decisions. *United States v. Delaware, Lackawanna and Western Railroad Company, and Delaware, Lackawanna and Western Coal Company.* Decided April 7, 1914.
146. U. S. Supreme Court Decisions. *Pullman's Palace Car Company v. Missouri Pacific Railway Company.* Decided December 7, 1885. 115 *U. S. Reports*, pp. 587-598.
147. U. S. Supreme Court Decisions. *Interstate Commerce Commission v. Baird.* Decided April 4, 1904. 194 *U. S. Reports*, pp. 25-47.

148. U. S. Supreme Court Decisions. New York, New Haven and Hartford Railroad Company *v.* Interstate Commerce Commission. Decided February 19, 1906. 200 *U. S. Reports*, pp. 361-405.
149. U. S. Supreme Court Decisions. Hale *v.* Henkel. Decided March 12, 1906. 201 *U. S. Reports*, pp. 43-89.
150. U. S. Supreme Court Decisions. The United States, *ex rel.* the Attorney General of the United States *v.* Delaware and Hudson Company *et al.* Decided May 3, 1909. 213 *U. S. Reports*, pp. 366-419.
151. U. S. Supreme Court Decisions. United States *v.* Lehigh Valley Railroad Company. Decided April 3, 1911. 220 *U. S. Reports*, pp. 257-274.
152. U. S. Supreme Court Decisions. United States *v.* Erie Railroad Company *et al.* Decided April 3, 1911. 220 *U. S. Reports*, pp. 275-276.
153. U. S. Supreme Court Decisions. United States *v.* Reading Company. Temple Iron Company *v.* United States. Reading Company *v.* United States. Decided December 16, 1912. 226 *U. S. Reports*, pp. 324-373.
154. U. S. Supreme Court Decisions. Delaware, Lackawanna and Western Railroad Company *v.* United States. Decided December 1, 1913. 231 *U. S. Reports*, pp. 363-373.
155. U. S. Court Papers. Transcript of Record (in six vols.), Supreme Court of the United States, October Term, 1911.
 - No. 477. The United States, Appellant *v.* The Reading Company, the Philadelphia and Reading Railway Company, *et al.*
 - No. 485. The Temple Iron Company, Appellant *v.* The United States.
 - No. 504. The Reading Company *et al.*, Appellants, *v.* The United States.

Appeal to the Supreme Court in the Sherman Anti-Trust Case.

 - Vol. I. Miscellaneous.
 - Vol. II. Testimony of Government witnesses.
 - Vol. III. Government Exhibits.
 - Vol. IV and Vol. V. Testimony of defendant's witnesses.
 - Vol. VI. Defendant's exhibits.
156. U. S. Court Papers. Brief for the United States in nos. 477, 485 and 504, above.

157. U. S. Court Papers. Transcript of Record, Supreme Court of the United States, October Term, 1908, no. 562. The United States, *ex rel.* the Attorney General of the United States, Plaintiff in Error, *v.* Delaware, Lackawanna and Western Railroad Company. In error to the Circuit Court of the United States for the Eastern District of Pennsylvania.
158. U. S. Court Papers. Transcript of Record. Same title. No. 563. United States *v.* the Pennsylvania Railroad Company.
159. U. S. Court Papers. Transcript of Record. Same title. No. 564. United States *v.* The Lehigh Valley Railroad Company.
160. U. S. Court Papers. Transcript of Record, Supreme Court of the United States, October Term, 1908, no. 565. The United States of America, Appellant, *v.* The Delaware and Hudson Company. Appeal from the Circuit Court of the United States for the Eastern District of Pennsylvania.
161. U. S. Court Papers. Transcript of Record. Same title. No. 566. United States *v.* The Erie Railroad Company.
162. U. S. Court Papers. Transcript of Record. Same title. No. 567. United States *v.* the Central Railroad Company of New Jersey.
163. U. S. Court Papers. The "Commodity Clause" Cases. In the Supreme Court of the United States, October Term, 1908. Nos. 559-570. The United States, *ex rel.* the Attorney General of the United States, Plaintiff in Error, *v.* the Delaware and Hudson Company *et al.* In error to the Circuit Court of the United States for the Eastern District of Pennsylvania. The United States, Appellant, *v.* The Delaware and Hudson Company *et al.* Appeals from the Circuit Court for the Eastern District of Pennsylvania. Brief for the United States.
164. U. S. Court Papers. The "Commodity Clause" Cases. Same title. Supplemental Brief for the United States.
165. U. S. Court Papers. The "Commodity Clause" Cases. Same title. Memorandum for the United States on the New Haven case in connection with certain proposed amendments of the commodity clause.
166. U. S. Court Papers. The "Commodity Clause" Cases. Same title. General Brief for Defendants in Error and Appellees.
167. U. S. Court Papers. The "Commodity Clause" Cases. Same title. Opening argument of Robert W. deForest, dated

- January 18, 1909, on the Constitutionality of the "Commodity Clause."
168. U. S. Court Papers. The "Commodity Clause" Cases. Nos. 559 and 565. The United States *v.* The Delaware and Hudson Company. Brief on behalf of the Delaware and Hudson Company, Appellee and Defendant in Error.
 169. U. S. Court Papers. The "Commodity Clause" Cases. Same title. Reply Brief on behalf of the the Delaware and Hudson Company, Appellee and Defendant in Error.
 170. U. S. Court Papers. The "Commodity Clause" Cases. Nos. 560 and 566. The United States *v.* The Erie Railroad Company. Brief for the Erie Railroad Company.
 171. U. S. Court Papers. Original Petition in the United States, petitioner, *v.* The Delaware, Lackawanna and Western Railroad Company and the Delaware, Lackawanna and Western Coal Company in the District Court of the United States for the District of New Jersey.
 172. U. S. Court Papers. Original Petition in the United States, petitioner, *v.* Lehigh Valley Railroad Company *et al.* in the District Court of the United States, Eastern District of Pennsylvania, 1914.
 173. U. S. Court Papers. Original Petition in the United States, petitioner, *v.* Reading Company *et al.* in the District Court of the United States, Eastern District of Pennsylvania. In equity, no. 1095, Sept. Sess., 1913.
 174. U. S. Court Papers. The United States, petitioner, *v.* Reading Co. *et al.* in the District Court of the United States, Eastern District of Pennsylvania. In equity, no. 1095, Sept. Sess., 1913. The separate answers of the Reading Company; the Philadelphia and Reading Railway Company; the Philadelphia and Reading Coal and Iron Company; the Central Railroad Company of New Jersey; the Lehigh Coal and Navigation Company; the Lehigh and Hudson River Railway Company; the Lehigh and New England Railroad Company.
 175. U. S. Dept. of Commerce and Labor. *Bi-monthly Bulletins* on retail prices.
 176. U. S. Dept. of Commerce and Labor. *Yearly Bulletins* on wholesale prices.
 177. U. S. Dept. of Commerce and Labor. Report to the President on Anthracite Coal Strike. *Bulletin* no. 43, November, 1902.

178. U. S. Dept. of Commerce and Labor. Report of the Anthracite Coal Strike Commission. *Bulletin* no. 46, May, 1903.
179. U. S. Dept. of Commerce and Labor. F. J. Warne, The Union Movement among Coal Mine Workers. *Bulletin* no. 51, March, 1904.
180. U. S. Dept. of Commerce and Labor. *Eleventh Special Report of the Commissioner of Labor*. "Regulation and Restriction of Output," pp. 485-529.
181. U. S. Geological Survey. *Mineral Resources*, 1882-1912.
182. U. S. Geological Survey. *Twenty-second Annual Report*, 1900-1901. Part III, Coal, Oil, Cement. C. W. Hayes, The Coal Fields of the United States, pp. 7-24, H. W. Stoek, The Pennsylvania Coal Field, pp. 55-117.
183. U. S. Geological Survey. Division of Mining and Mineral Resources. General Map of the Anthracite Coal Fields of Pennsylvania, 1901. Compiled by W. W. Ruley.
184. U. S. Geological Survey. C. W. Hayes, Coal Fields of the United States, *Bulletin* no. 213, p. 257, 1903.
185. U. S. Industrial Commission, vol. ix, Transportation, pp. xxiv-xxxiv, cxxix-clcvi, 451 *et seq.*; vol. xii, Mining, pp. cix-cxlv; vol. xix, Final Report, pp. 444-466.
186. U. S. Dept. of Justice. Annual Reports of the Attorney General.
187. U. S. Interstate Commerce Commission. *Annual Reports*, 1898-1912.
188. U. S. Interstate Commerce Commission. Files in case of W. R. Hearst *v.* Philadelphia and Reading Railway Company. Testimony, vols. i-ix, pp. 1-4377. Oral Argument, vols. x-xii, pp. 1-1066. Reargument, vol. xii, pp. 1-185. Docket no. 644. Court Record and vols. i-iii of Exhibits.
189. U. S. Interstate Commerce Commission. Court papers in above case, including the Transcript of Record, Brief for the Government, Brief for Appellees and Argument of Counsel.
190. U. S. Interstate Commerce Commission. John C. Haddock, Complainant, *v.* The Delaware, Lackawanna and Western Railroad Company, Defendant. *Reports*, vol. iv, pp. 296-324.
191. U. S. Interstate Commerce Commission. Cox Bros. and Company *v.* The Lehigh Valley Railroad Company. *Reports*, vol. iv, pp. 535-587.

192. U. S. Interstate Commerce Commission. Railways in the United States in 1902. Part II, A Forty-year Review of Changes in Freight Tariffs. Washington, 1903.
193. U. S. Interstate Commerce Commission. *Special Report*, no. 1. Intercompany Relationships of Railways in the United States as of June 30, 1906. Washington, 1908.
194. U. S. Interstate Commerce Commission. Report on Discriminations and Monopolies in Coal and Oil, January 25, 1907.
195. U. S. Interstate Commerce Commission. City of Spokane, Washington *et al.* v. Northern Pacific Railway Company *et al.* *Reports*, vol. xv, pp. 376-426.
196. U. S. Interstate Commerce Commission. Henry E. Meeker and Caroline H. Meeker, Copartners, trading as Meeker and Co. v. Lehigh Valley Railroad Company, *Reports*, vol. xxi, pp. 129-163.
197. U. S. Interstate Commerce Commission. Marion Coal Company v. Delaware, Lackawanna & Western Railroad Company. *Reports*, vol. xxiv, pp. 140-149.
198. U. S. Interstate Commerce Commission. *In re* investigation of rates, practices, rules, and regulations governing the transportation of anthracite coal, vols. i-xxxix; also answers to circular of December 23, 1912. *Docket* no. 4914.
199. U. S. Congressional Record. "Debates on Commodity Clause" in the years, 1906, 1908, and 1910.
200. U. S. Statistical Abstract.
201. U. S. Statutes. Part I. Public Laws, 59th Cong., 1905-1907. 34 Stat. 584 c. 3591.
202. Van Hise, Charles R. The Conservation of Natural Resources in the United States. 1910.
203. Virtue, G. O. "The Anthracite Combinations," *Quarterly Journal of Economics*, vol. x, April, 1896.
204. Virtue, G. O. Two Features of the Anthracite Coal Industry. *Doctoral Dissertation*, Harvard University, 1897.
205. Walker, Francis. "Monopolistic Combinations in the German Coal Industry," *Publications of the American Economic Association*, 3rd Series, vol. v, no. 3, August, 1904.
206. *Wall Street Journal*, 1900-1912.
207. Wright, H. B. Historical Sketches of Plymouth. 1873.

INDEX

INDEX

Alaska, 4.

Albany, N. Y., 83.

Allen, Nicho, 16.

Anthracite coal; history of industry by periods, 3; deposits, 4; foreign competition, 4-5; comparison of anthracite and bituminous coal areas, 5; value of product, 5; geology of the region, 5-6; discovery of, in the Wyoming Region, 7; early development of the Wyoming region, 7-10; Delaware and Hudson Canal Company, 8-10; discovery of, in the Lehigh region, 10; early development of the Lehigh region, 10-16; Lehigh Coal and Navigation Company, 12-16; Delaware Division canal, 15; Morris canal, 15-16; discovery of, in the Schuylkill region, 16-17; early development of the Schuylkill region, 17-18; Schuylkill Navigation Company, 18; development of the three regions compared, 19; summary, 19-20; growth of the trade, 20; opposition to incorporated companies, 20-22; opposition to union of transportation and mining privileges, 20-22; Packer Report, 21-22; extension of railroad facilities to 1850, 23; Lehigh and Susquehanna Railroad, 23-24; development of transportation systems after 1850 and purchases of coal lands, 24-31; Pennsylvania Coal Company, 24; Delaware, Lackawanna and Western Railroad, 24-26; Lehigh Valley Railroad, 26; Pennsylvania Railroad, 27; Central Railroad of New Jersey, 27; Erie Railroad, 27; movement facilitated by Pennsylvania legislation, 27; Philadelphia and Reading Railroad, 28-31; Pennsylvania Constitution of 1874, 31;

results of competition between the railroads and the canals, 32-37; growth of the trade, 38-39; development of the three regions compared, 39; the combinations from 1873 to 1898, 40-58; attempts at curtailment of output before 1873, 40-41; the pools of 1873-1876, 41-44; competition, 1877, 44; the pool of 1878, 45; competition, 1879, 46; a friendly understanding, 1880-1884, 46-47; the pool of 1885, 47-48; the pool of 1886, 48-49; Interstate Commerce Act, 1887, 49; conduct of the trade, 1887-1891, 49-50; the Reading Combination of 1892-1893, 50-53; its failure explained, 53-54; condition of the trade, 1893-1895, 54-55; the pool of 1896, 55-56; condition of the trade, 1897-1898, 56; summary of pooling agreements, 56-57; explanation thereof, 57-58; the development of an effective combination since 1898, 59-97; purchase of the New York, Susquehanna and Western Railroad by the Erie Railroad, 59-61; purchase of the Central Railroad of New Jersey by the Reading Company, 61-64; purchase of the New York, Ontario and Western Railway by the New York, New Haven and Hartford Railroad, 64-65; purchase by the Lehigh Coal and Navigation Company of a controlling interest in the Lehigh and New England Railroad, 65-66; increase by the Lehigh Coal and Navigation Company of its stockholdings in the Lehigh and Hudson River Railway, 66-67; development of a community of interest among the railroads through inter-ownership of stock and through interlocking di-

rectorates, 67-73; purchase of Simpsons and Watkins by the Temple Iron Company, 78-82; purchase of the Pennsylvania Coal Company by the Erie Railroad, 83-84; purchase of other smaller coal companies, 85-86; purchase of Coxe Brothers and Company by the Lehigh Valley Railroad, 86-87; percentage contracts for the purchase of, 87-97; the production of, 98-131; growth of the trade, 98-100; production by regions, 101-103; production by companies, 103-105; proportion of output mined by railroad coal companies, 104-107; proportion of output controlled by railroad coal companies, 105-107; distribution of the unmined tonnage, 107-110; reserve supply, 110-113; relation of the railroads to the more important coal mining companies, 113-131; Philadelphia and Reading Railway, 114-117; Central Railroad of New Jersey, 117-118; Lehigh Coal and Navigation Company, 118-119; Lehigh Valley Railroad, 119-122; Erie Railroad, 122-124; Pennsylvania Railroad, 124-126; New York, Ontario and Western Railway, 126-128; Delaware, Lackawanna and Western Railroad, 128; Delaware and Hudson Company, 129-130; summary, 130-131; the transportation of, 132-155; early complaints as to the unreasonableness of the freight rates, 132-133; the freight rates now in effect, 133-135; operating costs of transporting, 135-138; earnings of Lehigh Valley, 138-139; earnings and dividends of companies, 139-141; stock market quotations of the common stock of eight important companies, 141; decision of Interstate Commerce Commission in the Meeker case, 142-143; decision of Interstate Commerce Commission in the Marion Coal Company case, 143-144; significance of the freight rate, 144-145; maintenance of freight rates at their

present level explained, 146-147; a pool in the transportation of, to market shown, 147-155; constancy of percentage shipments, 149-151; use of Temple Iron Company, 151-155; interlocking directorates, 154-155; summary, 155; the price of, 156-179; table of prices, 156-157; rise in prices in 1900 and 1902, 157; rise in prices compared with increase in mining costs, 158-159; rise in prices compared with general rise in prices, 159-160; mode of effecting advances, 161-162; rise in prices in 1912, 162-163; investigation of Bureau of Labor, 163-164; comparison of price movements before 1901 with those since 1901, 165-166; the summer discounts, 166-167; economies of combination, 167; comparison of circular prices and selling prices during the period of competition, 167-168; during the period of combination, 168-170; uniformity of price circulars explained, 170-171; the price of the Reading Coal and Iron Company the standard, 172-173; extent of competition between the companies, 174; absence of foreign competition, 174-175; competition of other fuels, 175; distribution of the consumption of, 175-177; retail prices, 178; summary, 178-179; the legal status of the combination, 180-218; investigation of the business by the Interstate Commerce Commission, 181-183; decision of the Supreme Court in the New Haven case, 183-184; investigation of the bituminous coal business by the Interstate Commerce Commission, 184-186; factors directing public attention to conditions in the trade, 186-187; enactment of the commodity clause legislation, 187-192; its effect on the railroads, 193-194; difficulties of compliance, 194-195; extent of compliance, 195-196; attempt to suspend penalties, 196; proposed amendment of the

- clause, 197; government prosecution, 197-198; decision of Circuit Court, 198; decision of Supreme Court, 198-201; further efforts to amend the clause, 201; organization of the Delaware, Lackawanna and Western Coal Company, 203-204; readjustment of the affairs of the Delaware and Hudson Company, 204-205; another Supreme Court decision, 205-206; organization of the Lehigh Valley Coal Sales Company, 207-208; further government proceedings against the Lackawanna, 208-209; decision of Circuit Court, 209-210; further proceedings against the Reading, the Central of New Jersey, the Lehigh Coal and Navigation Company, and the Lehigh Valley, 210-212; prosecution of the companies for violation of the Sherman Anti-Trust Act, 212-214; decision of Circuit Court, 214; decision of Supreme Court, 214-217; conclusion, 219-220.
- Anthracite Coal Operators Association, 74, 83.
- Arkansas, 4.
- Arthur Kill, N. J., 50.
- Ashland, Pa., 6.
- Australia, 4.
- Austria, 4.
- Baer, G. F., 63-64, 68, 77-81, 146-147, 152, 161, 171-173.
- Bailey, Senator, 189, 201-202.
- Baker, G. F., 52, 64, 69, 79.
- Baltimore, Md., 8, 176.
- Baltimore and Ohio Railroad, 63-64, 70, 72-73, 181, 185.
- Barley coal, *see* Sizes.
- Beaver Meadow Railroad and Coal Company, 26.
- Belvidere, N.J., 74.
- Bernice coal basin, 6.
- Bethlehem, Pa., 66.
- Bituminous coal, 5, 70, 160, 163, 175, 181, 185-187, 193, 195-196.
- Black Diamond Coal Company, 85, 127.
- Boston, Mass., 178.
- Boston and Maine Railroad, 53-54.
- Bound Brook, N. J., 50, 62, 64.
- Broken coal, *see* Sizes.
- Brooklyn, N. Y., 174.
- Buckwheat coal, *see* Sizes.
- Buffalo, N. Y., 147, 176, 178.
- Buffalo, Rochester and Pittsburgh Railroad, 195-196.
- Buffington, Judge, 93, 121, 198, 214, 216.
- Bureau of Anthracite Coal Statistics, 43, 95, 151, 153, 174.
- Bureau of Labor, 160, 163-164, 168-169, 178.
- Campbell Hall, N. Y., 66.
- Canada, 4, 177.
- Canals, anthracite, 3, 9, 15-16, 18-20, 23, 26, 28, 32-37.
- Carbondale, Pa., 8-10.
- Carlisle, Pa., 7.
- Cassatt, A. J., 65.
- Central New England Railroad, *see* New York, New Haven and Hartford Railroad.
- Central Railroad of New Jersey, 25, 27, 29, 35-36, 41, 46, 48, 50-53, 61-64, 66-73, 79, 81, 88, 90, 94, 104, 108-110, 117-119, 128-130, 133-138, 140-141, 143, 146, 148-149, 152, 154, 167-170, 173, 181, 193-195, 197, 210, 213-215, 217-218.
- Certificates of indebtedness, 120, 124, 143.
- Charleston, S. C., 178.
- Chesapeake and Ohio Railroad, 70, 183-184.
- Chestnut coal, *see* Sizes.
- Chicago, Ill., 176, 178.
- China, 4.
- Cincinnati, Ohio, 176.
- Circuit courts, decisions of, 182-183, 197-198, 202, 205-212, 214, 216-217.
- Circulars, price, *see* Prices.
- Cist, Jacob, 12.
- Cleveland, Ohio, 178.
- Coal, anthracite, *see* Anthracite coal.
- Coal, bituminous, *see* Bituminous coal.

- Colorado, 4.
 Columbia, Pa., 7, 35.
 Commodity Clause, 129, 186-212, 218-220.
 Communipaw (N. Y. Harbor), 133-134.
 Community of interest, 52, 59, 61, 66-73, 82, 86, 113-131, 147, 151-152, 154-155, 185, 203-204, 207-209, 216.
 Competition, foreign, 4-5, 174-175, 179-180; of other fuels, 175, 179-180; between the anthracite companies, 174; between the railroads and the canals, 32-37.
 Congress, 163, 184-185, 187-193, 196-198, 200-202.
 Connell Coal Company, 85.
 Consolidations, anthracite, 24-25, 50-54, 59-67, 186.
 Constancy of percentage shipments, 149-151, 155.
 Consumption, distribution of, of anthracite, 176-177.
 Cost of mining, 102-103, 112, 158-159, 163-165, 178.
 Cost, operating, of transporting anthracite, 135-138, 142, 155.
 Coster, C. H., 114.
 Coxe, Alexander, 87.
 Coxe Brothers and Company, 41, 69, 86-87, 104-105, 108-110, 122, 132-133, 148, 186.
 Cranston, R. I., 4.
 Crawford, Senator, 202.
 Daniel, Senator, 189.
 Dauphin, Pa., 6.
 Delaware and Hudson Canal Company, *see* Delaware and Hudson Company.
 Delaware and Hudson Company, 8-9, 19, 21, 23-24, 27-28, 32, 37, 41, 46, 60, 69-73, 83, 85, 103-104, 108-109, 129-130, 133, 140-141, 146, 148-149, 154-155, 158, 163, 171-172, 181, 193-194, 197, 202, 204-205, 213.
 Delaware and Raritan canal, 35.
 Delaware Division canal, 15, 20, 33-37.
 Delaware, Lackawanna and Western Coal Company, *see* Delaware, Lackawanna and Western Railroad.
 Delaware, Lackawanna and Western Railroad, 24-27, 29, 41-42, 46, 52, 59-60, 68-73, 79, 81, 90, 94, 103-105, 108-109, 113, 128, 130, 133-135, 140-141, 143-144, 146-149, 152, 154, 159-161, 169-170, 172, 181, 193-194, 197, 202-205, 208-209, 211, 213, 218.
 Delaware river, 8-9, 15, 25-27, 35, 74.
 Delaware, Susquehanna and Schuylkill Railroad, *see* Coxe Brothers and Company.
 Delaware Valley and Kingston Railroad, 82, 84, 216.
 Deposits, anthracite, 4, 102.
 Discounts, summer, *see* Prices.
 Discovery of anthracite, 7, 10, 16-17.
 Dissolution proceedings, attempted, *see* Government prosecutions.
 Dividends, *see* Profits.
 Drexel and Company, 79.
 Duluth, Minn., 176.
 Earnings, anthracite, *see* Profits.
 Easton, Pa., 15-16.
 Easton and Amboy Railroad, 26.
 Economies of combination, 167.
 Edgewater (N. Y. Harbor), 60, 92, 133-134.
 Egg coal, *see* Sizes.
 Elizabethport (N. Y. Harbor), 133-136.
 Elk Hill Coal and Iron Company, *see* New York, Ontario and Western Railway.
 Elkins, Senator, 188-189, 191, 196-197.
 England, 4.
 Erie and Wyoming Railroad, *see* Erie Railroad.
 Erie Railroad, 24, 26-27, 41-42, 48, 59-61, 68-73, 79, 81-84, 86, 89-90, 94, 103-105, 108-109, 122-124, 130, 133-134, 140-141, 143, 146, 148, 152, 154, 169-170, 172, 181, 193-195, 197, 213-215, 217-218.
 Excelsior Enterprise Company, 114.
 Experiments, early, with anthracite, 7, 11-12, 17.
 Exports, 176-177.

- Fell, Judge Jesse, 11.
 Foraker, Senator, 188, 197, 219.
 Foreign competition, *see* Competition.
 Forest City, Pa., 5.
 Fowler, T. P., 146-147.
 France, 4.
 Freight rates, anthracite, 46, 59-60, 64,
 74, 117-118, 128, 132-147, 155.
 Fuller, 88.

 Gallinger, Senator, 189.
 Geology of anthracite region, 5-6.
 Ginter, Philip, 10.
 Glen Alden Coal Company, 128.
 Gore, Obadiah, 7.
 Government prosecutions, 63, 80-81, 93,
 96, 106, 145, 154, 180-182, 192, 196-
 198, 205-214, 217-220.
 Gowen, F. B., 29-30, 43.
 Granby Coal Company, 25.
 Grate coal, *see* Sizes.
 Gravel Place, Pa., 59.
 Gravity railroads, 9-10, 14-15, 24.
 Gray, Judge, 214.
 Griffith, William, 107-108, 111-112.
 Growth of the coal trade, 10, 14, 16, 18,
 20, 38-39, 44, 46-47, 50, 55-56, 98-
 100.
 Guaranty Trust Company, 78-81.

 Haddock, J. C., 94-95, 186.
 Hanna, Marc, 89.
 Harlan, Justice, 201.
 Harris, J. S., 64, 69, 151, 172.
 Harrisburg, Pa., 7.
 Harwood Coal Company, 86.
 Hauto, 13.
 Hawley, Pa., 24, 82.
 Hazard, Erskine, 12-13, 17.
 Hazelton, Pa., 6.
 Hazelton Coal Company, 26, 194-195.
 Hazelton Railroad, 26.
 Hearst, W. R., 151, 175, 186.
 Hepburn bill, 49, 146, 187-188, 190-192,
 201, 210, 219.
 Highland Coal Company, 122.
 Hillside Coal and Iron Company, *see*
 Erie Railroad.

 Hoboken, N. J., 25, 133-134, 143-144.
 Honesdale, Pa., 10.
 Honey Brook Coal Company, 36.
 House of Representatives, *see* Congress.
 Howe, 90.
 Hudson Coal Company, *see* Delaware
 and Hudson Company.
 Hudson river, 9-10, 82-83.

 Imports, 5, 174-175.
 Incorporated companies, early opposi-
 tion to, 20-22.
 Independent operators, *see* Individual
 operators.
 Indianapolis, Ind., 178.
 Individual operators, 19-21, 28, 41-42,
 52, 54, 59, 73-97, 103-110, 117, 145,
 163, 176, 182, 185-186, 197, 202, 213,
 216.
 Industrial Commission, 151, 171, 186.
 Interlocking directorates, *see* Community
 of interest.
 Inter-ownership of stock, *see* Community
 of interest.
 Interstate Commerce Act, 49.
 Interstate Commerce Commission, 75,
 95, 120-121, 123, 135-136, 142-145,
 147, 155, 159, 175, 181-187, 193, 196-
 197.
 Investigations, 49, 135, 163-164, 180-
 186.
 Ireland, 4.

 Jacksonville, Fla., 178.
 Jamison Coal and Coke Company, 185.
 Jersey City, N. J., 16, 60, 62.
 Jones, John H., 43.

 Kingston Coal Company, 105.
 Kuhn, Loeb and Company, 65.

 Labor, *see* Strikes.
 Lackawanna and Bloomsburg Railroad,
 25.
 Lackawanna Iron and Steel Company,
 127.
 Lackawanna Railroad, *see* Delaware,
 Lackawanna and Western Railroad.

- Lackawanna region, 75, 102.
 Lackawanna Valley Coal Company, 128.
 Lackawaxen, Pa., 82-83.
 Lackawaxen river, 8-9.
 Lake Shore and Michigan Southern Railway, *see* New York Central Railroad.
 Lancaster county, 7.
 Laurel Run Improvement Company, 30.
 Lease of anthracite properties, 12, 26, 34-36, 46, 48, 50-51, 60-61.
 Legal interest, 199-200, 202-203, 212.
 Legislation, federal, *see* Hepburn bill and Sherman Anti-Trust Act.
 Legislation, Pennsylvania, 3, 9, 13, 18, 21, 24-25, 27, 30, 76, 164.
 Lehigh and Hudson River Railway, 66-67, 119.
 Lehigh and New England Railroad, 65-66.
 Lehigh and Susquehanna Railroad, 23-24, 27, 35-36, 118.
 Lehigh and Wilkes-Barre Coal Company, *see* Central Railroad of New Jersey.
 Lehigh canal, *see* Lehigh Coal and Navigation Company.
 Lehigh Coal and Navigation Company, 13-16, 19-21, 23-24, 28, 32-37, 46, 65-67, 104, 108, 110, 113, 118-119, 140-141, 210, 218.
 Lehigh Coal Mine Company, 10-13.
 Lehigh region, 6, 9-16, 18-20, 23-24, 27-28, 36, 38-39, 66, 86, 101-102, 123, 134-137.
 Lehigh river, 6, 10-14, 66.
 Lehigh Valley Coal Company, *see* Lehigh Valley Railroad.
 Lehigh Valley Coal Sales Company, 207-208, 211-212.
 Lehigh Valley Railroad, 26-27, 29, 33, 35, 41, 43, 45, 50-54, 60, 68-73, 79, 81, 85-88, 90, 94-97, 103-105, 108-110, 119-122, 128-129, 130, 132-135, 138-144, 146, 148-149, 151-152, 154, 161, 169-170, 181, 193-195, 197, 205-208, 211-213, 218.
 Little Schuylkill Railroad, 19.
 Louisville and Nashville Railroad, 196.
 Luzerne county, 25, 74.
 Lykens Valley Coal Company, *see* Pennsylvania Railroad.
 Lytle Coal Company, *see* Pennsylvania Railroad.
 McGill, Chancellor, 53.
 McKinley, President, 89.
 McLaurin, Senator, 189.
 McLeod, A. A., 50, 52-54, 88.
 Mahanoy basin, 6, 102.
 Mahanoy City, Pa., 6.
 Manchester, N. H., 178.
 Marion Coal Company, 143-144.
 Massachusetts, 4, 14.
 Mauch Chunk, Pa., 6, 10, 12, 15, 24, 35.
 Maxwell, J. R., 52, 64, 69.
 Maybrook, N. Y., 67.
 Meeker and Company, 120, 142, 144.
 Mexico, 4.
 Milwaukee, Wis., 176, 178.
 Miner, Charles, 12.
 Mineral Railroad and Mining Company, *see* Pennsylvania Railroad.
 Minneapolis, Minn., 178.
 Morgan, J. P., 48, 54, 63-65, 68-70, 73, 78-79, 84, 114, 154.
 Morris and Essex Railroad, 25, 35.
 Morris canal, 16, 20, 26, 32, 35.
 Morris, Robert, 10.
 Morris, William, 17.
 Mortgages, 121, 123, 127, 194-195.
 Mount Carmel, Pa., 6.
 Nanticoke Coal and Iron Company, 24-25.
 National Company, 114-115.
 New Jersey, 16, 25, 35, 50-51, 59, 61, 63, 67, 75, 123, 143, 177, 203, 207.
 New Mexico, 4.
 New Orleans, La., 178.
 New York, N. Y., 8-10, 16, 35, 39, 49, 63-64, 83, 92, 96, 133, 142, 152, 160, 175-179.
 New York and Middle Railroad and Coal Company, 122.
 New York Central Railroad, 66, 68-73, 155.

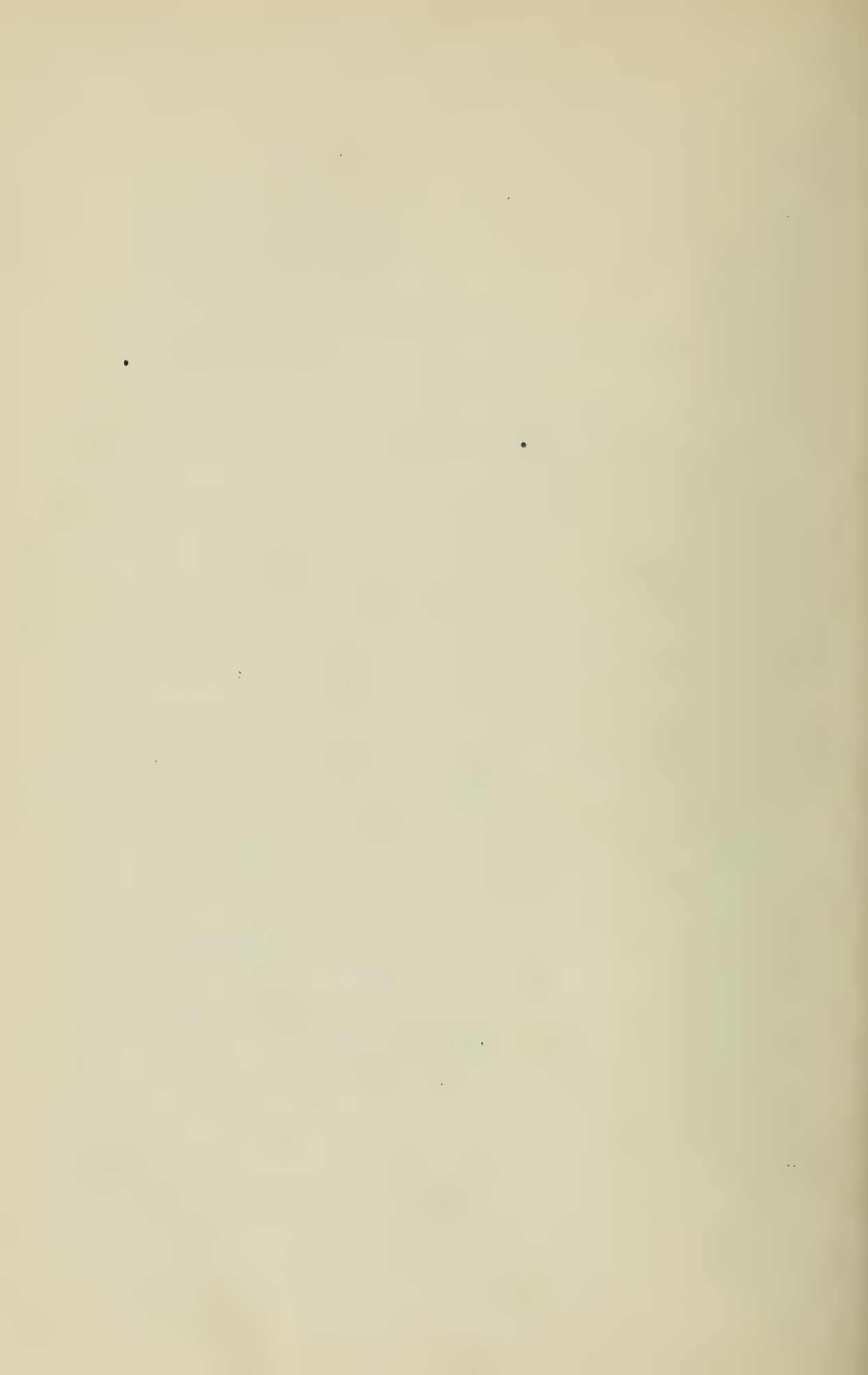
- New York, New Haven and Hartford Railroad, 64-67, 69, 155, 183-184, 186.
- New York, Ontario and Western Railroad, 41, 64-65, 69, 71-73, 75, 84-85, 88, 104-105, 108-109, 126-128, 130, 133-134, 140-141, 143, 146, 148, 154-155, 181, 193, 213.
- New York Public Service Commission, 65, 155.
- New York State, 9, 27, 59, 66-67, 82-83, 177.
- New York, Susquehanna and Western Coal Company, *see* New York, Susquehanna and Western Railroad.
- New York, Susquehanna and Western Railroad, 41, 59-61, 75, 79, 81, 88, 108, 124, 133-134, 148, 152, 181, 213-215, 217-218.
- New York, Wyoming and Western Railroad, 74-75, 82, 89, 216.
- Newark, N. J., 16, 178.
- Newport News, Va., 183.
- Norfolk and Western Railroad, 70, 197.
- Norris, R. V., 102.
- Northern Central Railway, *see* Pennsylvania Railroad.
- Northern Coal and Iron Company, 28, 129.
- Northumberland, Pa., 25.
- Officers, common, *see* Community of interest.
- Omaha, Neb., 178.
- Olyphant, 171-172.
- Oswego and Syracuse Railroad, 25.
- Packer Coal Company, 122.
- Packer report, 21, 23.
- Panics, 31, 36, 38, 47, 54, 100, 166, 195-196.
- Panther Creek basin, 6.
- Panther Creek Railroad, 66.
- Pardee Brothers and Company, 87.
- Pea coal, *see* Sizes.
- Pennsylvania and New York Canal and Railroad Company, 26.
- Pennsylvania Coal Company, *see* Erie Railroad.
- Pennsylvania Coal Waste Commission, 110-111.
- Pennsylvania Constitution, 31, 76-77, 114, 124, 180.
- Pennsylvania Geological Survey, 107.
- Pennsylvania Legislature, *see* Legislation, Pennsylvania.
- Pennsylvania Public Service Commission, 137-138.
- Pennsylvania Railroad, 27-29, 35, 41, 43-44, 48-49, 68-70, 72-73, 81, 85, 87, 103-104, 108-109, 124-126, 130, 133-135, 137, 140-141, 148-149, 154, 181, 185-187, 193-194, 198, 210-211, 213.
- Pennsylvania State Department of Mines, 106-107.
- Pennsylvania State Railroad Commission, *see* Pennsylvania Public Service Commission.
- Percentage contracts, 52-53, 73-75, 81, 83, 87-97, 105-106, 127, 145, 164, 176, 182, 186, 213-214, 216-217.
- Perkiomen Railroad, 62.
- Perpetual contracts, *see* Percentage contracts.
- Perth Amboy (N. Y. Harbor), 26, 92, 96-97, 123, 133-134, 142-143.
- Peru, 4.
- Peters, of Williams and Peters, 172.
- Philadelphia, Pa., 8-13, 17-18, 62-64, 68, 137-138, 164, 176-179, 207.
- Philadelphia and Reading Coal and Iron Company, *see* Reading Company.
- Philadelphia and Reading Railway, *see* Reading Company.
- Phillipsburg, N. J., 26, 35, 67.
- Piles, Senator, 190.
- Pittston, Pa., 24, 74.
- Plymouth, Pa., 7.
- Pocahontas Coal and Coke Company, 197.
- Pools, 3, 40-58.
- Port Clinton, Pa., 34.
- Port Johnston (N. Y. Harbor), 133-136.
- Port Liberty (N. Y. Harbor), 133-134, 162, 170.
- Port Reading (N. Y. Harbor), 133-134, 162, 170.

- Port Reading Construction Company, 51.
 Port Reading Railroad, 50-51, 53, 62.
 Port Richmond, Pa., 162.
 Ports, upper and lower, 133, 152.
 Pottsville, Pa., 6, 17-18.
 Poughkeepsie Bridge system, *see* New York, New Haven and Hartford Railroad.
 Prepared sizes, *see* Sizes.
 Price, Waterhouse and Company, 137.
 Prices, 3, 40, 42-50, 53-58, 74-75, 83, 88-93, 95-97, 113, 124, 127, 141, 144-145, 156-181, 203.
 Production of anthracite, 3-5, 98-131.
 See Shipments.
 Profits of anthracite companies, 32-37, 44, 46-47, 116-118, 120, 123-124, 127-130, 138-142, 145, 155, 159, 164, 203-204, 208.
 Providence Coal Mining Company, 4.
 Providence, R. I., 4.
 Purchases of anthracite companies, 26, 28, 30, 33-34, 61-69, 73-87, 186.

 Rates, *see* Freight rates.
 Reading and Columbia Railroad, 35.
 Reading Company, 18, 28-32, 34-35, 38, 41, 43-46, 48, 50-55, 57, 61-64, 68-74, 79-81, 88, 90, 94, 103-104, 108-110, 113-117, 128-130, 133-134, 137-138, 140-141, 143, 146-149, 151-152, 154, 157-158, 161-162, 169-170, 172-173, 175, 178-179, 181, 194-195, 197-198, 210-211, 213, 215, 217-218.
 Reading Railroad, *see* Reading Company.
 Red Rock Fuel Company, 184-185.
 Regions, anthracite, 5-6. *See* Lehigh, Schuylkill and Wyoming regions.
 Reserve supply of anthracite, 62, 84, 110-113.
 Rhode Island, 4.
 Rice coal, *see* Sizes.
 Richmond, Va., 178.
 Righter Coal Company, 85.
 Robinson, John, 12.
 Rockefeller, William, 65, 79.
 Rondout, N. Y., 10, 82-83.
 Roosevelt, President, 181, 188.
 Royalties, 125.
 Ruley, W. W., 153, 174.
 Russia, 4.

 St. Louis, Mo., 178.
 Sale, *see* Prices.
 Schuylkill canal, *see* Schuylkill Navigation Company.
 Schuylkill Coal and Iron Company, 85, 129.
 Schuylkill county, 25, 27, 29.
 Schuylkill Navigation Company, 12, 18-20, 28-29, 32-34.
 Schuylkill region, 6, 9, 12, 15-20, 23, 28-29, 32, 34-35, 38-39, 41, 62, 66, 101-103, 134, 137-138.
 Schuylkill river, 17-18.
 Scott, Tom, 43.
 Scranton, Pa., 6, 25, 82, 127, 178, 194.
 Seasonal demand, 57-58, 166-167.
 Selling costs, 96-97.
 Senate, *see* Congress.
 Seneca Coal Company, 85.
 Shamokin basin, 6, 102.
 Shamokin, Pa., 6.
 Shanferoke Coal Company, 85, 129.
 Shearn, Clarence, 171.
 Shenandoah, Pa., 6.
 Sherman Anti-Trust Act, 153, 181, 209-212, 218-219.
 Shickshinny, Pa., 5.
 Shipments of anthracite, 7-8, 10, 14, 16-19, 38-39, 43-50, 54-57, 98-102, 136, 138, 147-151, 154-155, 166-167.
 Shoemaker, George, 17.
 Simpson and Watkins, 75, 77-82, 93.
 Sizes of anthracite, 40, 161.
 Slatington, Pa., 66.
 Sliding scale of wages, 162, 176.
 Sloan, Sam, 52.
 Smith, Abijah, 7-8.
 South Amboy (N. Y. Harbor), 133-134.
 Spain, 4.
 Standard Oil Company, 94.
 Stetson, F. L., 114.
 Steuben Coal Company, 25.
 Stillman, James, 79.

- Stock market quotations, 141.
 Storage, 58.
 Stotesbury, E. T., 68.
 Stove coal, *see* Sizes.
 Strikes, 41, 89, 100, 134, 141, 152, 157-159, 162, 164, 180-181, 186.
 Stroudsburg, Pa., 59-60.
 Sturges, E. B., 75.
 Sullivan county, 6.
 Summit Branch Mining Company, *see* Pennsylvania Railroad.
 Summit Branch Railroad Company, *see* Pennsylvania Railroad.
 Sunbury and Erie Railroad, 33.
 Supreme Court of the United States, 63, 80, 97, 104, 121, 129, 145, 153, 164, 176, 182-184, 196, 198-206, 209-210, 214-217, 219.
 Susquehanna canal, 35.
 Susquehanna Coal Company, *see* Pennsylvania Railroad.
 Susquehanna Connecting Railroad, 60.
 Susquehanna river, 6-8, 23, 26.
 Switzerland, 4.
 Tamaqua, Pa., 6, 19, 66.
 Tariff duties, 4, 174.
 Taxation of anthracite coal, 164.
 Taylor, Pa., 143-144.
 Temple Iron Company, 76-82, 104, 128, 130, 151-155, 181-182, 213-217.
 Terminals, coal, 133.
 Terry, Parshall, 7.
 Thomas, E. B., 68, 83, 85, 87, 161, 171.
 Thorne, S. B., 217.
 Tillman, Senator, 184-185, 187-188, 190-192.
 Transportation of anthracite, 3, 132-155. *See also* Freight rates and Shipments.
 Trenton, N. J., 35.
 Truesdale, W. H., 94, 159, 161, 172.
 Twombly, H. McK., 65, 69, 79.
 Undercliff, *see* Edgewater.
 Union of transportation and mining privileges, 9-10, 12-14, 19-20, 22-27, 29-31, 163, 180. *See also* Commodity Clause.
 Union Railway Company, 29.
 Unmined tonnage of anthracite, 62, 107-110.
 Upper Lehigh region, 136.
 Vanderbilt interests, 65, 68, 70-71.
 Virginia, 4.
 Wales, 4.
 Walter, 120, 151, 161.
 Wanger, Representative, 201.
 Warrior Run Mining Company, 85.
 Washington State, 4.
 Washington, D. C., 176.
 Wastage in transportation of anthracite, 96-97.
 Waste in coal mining, 111-112.
 Weehawken (N. Y. Harbor), 133-134, 146-147.
 Weiss, Colonel Jacob, 10.
 Welsh, 64.
 White Haven, Pa., 23-24.
 White, Josiah, 12-13, 17.
 Wilkes-Barre, Pa., 5, 7, 23, 26, 35, 60.
 Wilkes-Barre and Eastern Railroad, 60.
 Woodlock, 69.
 Wurts, William, 8-9.
 Wyoming Coal and Land Company, 85.
 Wyoming region, 5-10, 16, 18-19, 23-24, 26-29, 36, 38-39, 59-60, 64, 74, 76, 82-83, 88, 95-96, 101-102, 134-137, 142-143, 173.
 Wyoming Sales Company, 75.



HD

2769

C62J6

Jones, Eliot

The anthracite coal
combination in the United
States

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

UTL AT DOWNSVIEW



D RANGE BAY SHLF POS ITEM C
39 16 03 24 06 009 1